



# AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K. MINOR, EDITOR.]

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[VOLUME II.—No. 9.]

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## AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, MARCH 2, 1833.

The Report of the Committee of the Paterson Railroad Company, and the "Statement of Facts in relation to the Origin, Progress, and Prospects of the New-York and Harlaem Railroad Company," are received, but unavoidably excluded from this number by the Report of the New-York Canal Commissioners. They will be attended to in our next.

**THE KNICKERBACKER.**—The third number of this very popular magazine is published this day. We have had but little opportunity to examine it, yet from that little, we believe it will be found equal in every respect (unless to critical eyes the few typographical errors should mar its beauty), to either of the preceding numbers. Annexed we give its contents.

1. Studies of Language, No. 3. (Hebrew Literature.)
2. Les Vétérans, from the French of Berenger
3. The Art of being Happy
4. Running against Time, by J. K. Paulding
5. Vagaries of a Humorist, No. 1
6. Rains of Ipsara
7. A Chapter on Offers, by a Young Man about Town
8. "I will Love thee no more"
9. Stock-and-eisen, or the Iron Trunk, a tale of the Confederation of the Rhine
10. To an imprisoned Lion
11. Peep at the Pow-wow, by a Member
12. Editor's Table
13. Literary and Critical Notices—
  - I New Edition of Lord Byron's Works
  - II Evenings in Greece, by Thomas Moore, Esq
  - III The Ghost Hunter, by the O'Hara Family
  - IV Rennie's Alphabet of Insects, &c
  - V Taylor's History of Ireland
  - VI Life of a Sailor
  - VII Flit's Lectures on Natural History.

14. Fine Arts—
  - I Engravings from the Works of Liverseege
  - II Turner's Annual Tour.

[For the American Railroad Journal.]

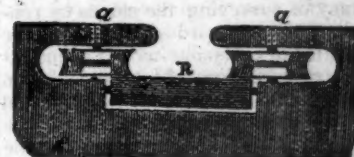
**COMPLETE SYSTEM OF RAILROADS.**—If a man can draw up four pounds over a pulley, and walk off at the rate of two miles an hour drawing up such a weight by a cord, then he can move a load of 1,000 lbs. on a level Railroad. And if the departures from an entire level are not great, they would not much increase the difficulty of locomotion. Who can estimate the convenience to the public of a system of Railroads intersecting the whole country, and affording to every village and farming neighborhood an easy communication to market at almost all seasons of the year: in all seasons certainly, except in blocking snows. It would accommodate especially the laboring classes, who have not capital enough to employ a horse and carriage, and who are accustomed to use their limbs—and who could readily reach a market with their articles of manufacture or produce, if they could travel on a Railroad constructed for their convenience. Among the inventions which have blessed the world, none more evidently give additional prosperity to towns, villages and farming regions, than improved means of communication. No inventions have exerted a more powerful influence in diffusing knowledge and in elevating intellectual character. A system which may bring easy means of conveyance to every man's door deserves attention. A system which gives to farms and places of business of various descriptions, 30 or 40 miles distant, the advantages heretofore enjoyed by similar places within a few miles of a large market, claims examination from the man of business, the political economist, and the friend of the human race.

PUBLICOLA.

**INTERNAL IMPROVEMENTS.**—A bill is before the Legislature of Pennsylvania, authorizing a loan of \$2,086,188 84, at 5 per cent irredeemable for 25 years. This money, when obtained, is to be disposed of in the following manner:—

For the Philadelphia and Columbia railroad, \$657,486 18; for the Alleghany portage railroad, \$414,793 06; for the Columbia line of the Eastern division of the Pennsylvania canal, \$35,835 25; for the Fran town line, \$32,712

04; for the Wyoming line of the N. Branch, \$115,202 46; for the Lycoming line of the West Branch division, including the Lewisburg cross cut, \$470,007 90; for the French creek division, \$162,991 98; and for the Beaver division \$181,159 97 cts.



[From the London Mechanics' Magazine.]

**IMPROVED LEADING BLOCKS.**—On examining some "leading blocks," as they are technically called, a short time since, I was struck with the appearances which many of them presented. In some, the pulley had set fast, and one side had been cut into by the rope, while in all, the way between the pulley was cut into deep grooves; evidently showing the existence of great mechanical disadvantage, where the reverse would have been highly desirable.

It occurred to me at the time, that a little addition would make a great improvement in this useful machine; and I send a sketch of a method of construction that would be found very much superior to those at present employed.

The prefixed sketch represents the side of a ship, or dock, &c., &c.; a a are two gun-metal sheaves, turning on iron axles, and having more end play than is usual. The sheaves rest upon a metal roller R, which runs freely upon an iron axis.

The roller should be closed in, about half-way up, both on the outside and within—[omitted in the sketch for the sake of distinctness, nor is it absolutely necessary.] The framing of the block should be lined with iron, and the whole kept well greased, to reduce the friction and prevent corrosion. With this form of block, the friction, and consequently the labor, as well as the wear and tear of ropes, would be greatly reduced. For, if the rope happened not to run against either of the sheaves, it would still work upon the roller, where motion would be almost as free. If the rope took into a sheave, that and the roller would turn together; the other sheave would be at liberty to turn with the roller, the friction between them most likely being sufficient to communicate motion.

The increased efficiency and durability of these blocks would amply repay the additional expenses of construction.

Yours, respectfully,

W. BADDELEY.

London, Sept. 27, 1832.



*Annual Report of the Canal Commissioners of the State of New-York.*

(Continued from page 117.)

Several land surveyors are examined as witnesses before the committee, and they are called upon to swear not only to fact, but also to the construction of the law. Accustomed to survey farms by running exterior lines, they very naturally came to the conclusion that canals should be surveyed in the same manner; and that the outward extremity of each bank is to be traced by the chain and compass, as the exact boundary of the public works. If it had occurred to the surveyors, or to the committee, that the sides of the canals, for at least one-third of the whole distance, are occupied by useless or spoil banks; that the exterior of these banks is extremely irregular and precipitous, being sometimes two or three, and sometimes ten or twelve rods wide; that they are constantly washed down by rains, and in some cases ploughed down by cultivation, and that they are never repaired or replaced, some doubts might have arisen as to the permanency of base lines thus located. It is only in cases of embankment, where the canal is raised above the ordinary level of the earth, that the exterior parts of the banks are occasionally strengthened and repaired as they decay. At the extremity of the banks where the committee and the land surveyors suppose the base lines ought to be run, the surface is often exceedingly uneven, interrupted by hills, ravines and swamps; and in constructing the canals, the logs, roots, brush and other rubbish were deposited at the extremity of the banks. The difficulty, expense, and inaccuracy of surveying the canals by running lines along the outward extremity of the banks, is palpable to every one who is acquainted with their construction. Lines thus drawn along the foot of the banks of the Erie canal from Albany to Buffalo, would necessarily be several miles longer than the real length of the canal, as ascertained upon the more direct and level surface of the towing-path; nor can a true survey and map be made by a resort to such exterior lines. Along the Mohawk river, the canal is frequently bounded by the water of the river on one side, and high perpendicular rocks on the other. Between the upper and lower aqueducts are several miles in succession of this description, where the site of the canal has been reclaimed from the bed of the river. How would the committee or surveyors provide for exterior lines in such cases? The law authorised the Canal Commissioners to procure surveys and maps of the canals, provided the expense did not exceed five thousand dollars. They were prohibited by law from incurring any expense to the State beyond that sum. If they had not been able to devise a plan of survey, by which the work could be executed for that sum, they were bound to desist from it altogether. But Mr. Trumbour, after determining to fix himself upon the State as a contractor, makes the further attempt to force his plan, and obtrude his construction of the law upon the public officers, who alone were responsible for its execution. And in the voluminous pages which the committee have compiled, he now occupies the unenviable situation of having offered originally to do the whole work which the law required for five thousand dollars, and of now claiming of the State considerably more than that sum for doing one half of it. Such is Mr. Trumbour's present claim, as exhibited to the committee. Is it possible that such claims can furnish a legitimate passport to the treasury of the State?

In the early stage of the transaction, Mr. Trumbour drew from the Surveyor-General an offhand and verbal assent to his proposed mode of surveying the canals. This assent was given unofficially, as the execution of the law was entrusted to the Canal Commissioners, and as the Surveyor-General had never consulted with them on the subject, and had not the means of making an estimate of the expense, or of ascertaining whether the appropriation would justify such a survey. This unofficial approval of Mr. Trumbour's plan, affords to the committee the basis of

many important conclusions in justification of Mr. Trumbour's course. But when the Surveyor-General, on the 6th March, 1832, as a member of the Canal Board, officially signs a report exposing the injustice of Mr. Trumbour's claims, the committee, after making an extract from the report, come to the conclusion "that the Canal Board did not intend the whole of the foregoing statement as conclusive in point of fact."

If we are not entirely mistaken, both the censure and applause of the committee are generally misapplied. They seem to us to have acted, from the beginning to the end of their labors, under mistaken impressions. But whether our views or theirs are correct, will be determined by the wisdom of the Legislature.

A report is herewith submitted in relation to Chemung and Crooked lake canals, by the acting Commissioner who has charge of those works.

S. VAN RENSSELAER,  
S. YOUNG,  
W. C. BOUCK,  
JONAS EARLL, Jr.

January 17, 1833.

*Re on the Chemung and Crooked Lake Canals.*

The acting Commissioner, having charge of the Chemung and Crooked Lake Canals, respectfully submits the following Report:

**CHEMUNG CANAL.**

The early and intense cold weather, of last winter, and the unfavorable spring, together with the scarcity of laborers, retarded the completion of this canal to a later period than was anticipated. The unfinished work between the Chemung river and the navigable waters of the inlet to the Seneca Lake, was completed the latter part of September. Sections ten and eleven, which comprised the deep cutting on the feeder, and upon which the greatest amount of work remained to be done last spring, were completed on the 30th of August. Sections sixteen and seventeen were abandoned by the contractors in the month of July, and a faithful man was appointed to finish them. He prosecuted the work with all proper diligence and economy, but the unfavorable condition in which it was left by the contractors, and the high wages consequent upon a scarcity of hands, increased the expenses to a sum exceeding the amount which remained unpaid on these sections. The balance, which is \$1,343.17, has been charged to the account of the contractors. The instance referred to, and the case of John Winans, who died during the progress of his work, are the only failures among the contractors on the Chemung canal. The balance which stands charged to John Winans, is \$148.79. Section thirty-five, which comprises the excavation of bars in the inlet, the formation of a towing-path on its margin, and the excavation of a canal from a bend in the inlet to the lake in a westerly direction, is not completed. Most of the excavation on this section is in an open marsh, and lower than the surface of the water in the lake. This work would have been pressed to a completion with the other work on the canal; but the water in the lake, during the two past years, has generally been above its ordinary level, and has deterred the contractor from commencing the excavation until last fall. Under these circumstances, it was thought proper to grant some indulgence, as there was a navigable connection between the Seneca lake and the canal by the inlet. The contractor is prosecuting the work this winter, with an intention of completing it before a rise of water in the spring.

The high embankment located on a river bluff on section two, and the adjoining embankment on section three, were made of coarse materials, and the necessary care in assorting them was no doubt omitted by the workmen, though it was often enjoined upon them. A lining of suitable materials was placed in the bottom and sides of the canal; but it was discovered, on the admission of the water, that the work was imperfectly done, and the profusion of the leakage rendered

it impracticable to pass a sufficient quantity to fill the canal, and occasioned a heavy slide from the bank into the river. It became necessary to remove the coarse materials from the bottom and sides to a proper depth, to increase the quantity of lining, and to enlarge the bank. The water was again admitted about the tenth of September; but it was then very low in the river, and the porous soil through which the canal was constructed for about seven miles, its thirsty condition at the time the water was admitted, and a continuation of dry weather, prevented a sufficient quantity from passing through the feeder to supply the other levels of the canal, until about the 20th of October. Since this period, the supply has been abundant, and it is now evident that the quantity filtrating from the canal has considerably diminished. It is believed that a continuation of the water in the canal during this winter and next spring, will so far serve to tighten it as to render an adequate supply for the next season certain.

On filling the locks for use, it was discovered that they were insufficient; and only a few boats passed from the summit level to the lake. The locks are constructed of wood, supported on the sides with braces, with a stone wall of masonry at the head, and a dry wall on the sides, resting on the foundation timbers. The locks are of ten feet lift; and the defect consists in their not being properly supported on the sides, to resist the great pressure of water within the chamber of the lock when it is filled. Those locks on which the work was well executed, have been frequently filled with water, without producing any material injury; while others, on which the work was badly executed, gave decisive evidence of being imperfect. This unfortunate occurrence was entirely unexpected, as several of the locks had been nearly filled with water, for the purpose of experiment, and no indications of their defect was discovered; but it is evident that the increased pressure, resulting from a full head of water, caused the sides to yield, and the angle of the sides in the bottom of the lock to open.

The public had a right to expect the use of this canal last fall; and some property was collected at Horseheads, and between that place and the Seneca lake, under the expectation of transporting it on the canal. The discovery that the locks were defective, occurred too late in the season to repair them for use before the closing of the navigation; and the undersigned regrets that this failure has defeated the arrangements predicated on the expectation of using this canal, and that it may result in a loss to the owners of property.

An experiment has been made upon one of the locks which proved most defective; and it has been ascertained that they can be made sufficiently strong, by connecting the longitudinal sill, on which the short posts are framed, more firmly with the bottom sills, with bolts, by additional braces, and by increasing the dry wall about fifty cubic yards to each lock. This plan for repairing the locks has been adopted, and the expense is estimated at eight thousand dollars, but an unfavorable winter may increase it to nine thousand dollars.

Nearly all the levels of the canal have been filled with water; the banks well tested; and every part of the work, except the locks, appears to be substantial.

The unusual floods of last spring materially injured the dam erected across the Chemung river. The great quantity of ice passing over it broke the range stick on the top of the dam, the top covering and front posts in several places, and also deepened the bed of the river below the apron and chute, and carried away a few of the piles on which the apron rested. The injured part of the dam has been repaired; an additional covering of oak plank has been placed on the most exposed part of it; and a pier filled with stone, resting on brush, has been sunk below the apron and chute, to prevent the reaction of the water, in the time of floods, from undermining the dam and chute. At the east end of the dam, an embankment was raised several feet above the highest flood marks. During the



flood a breach was made in the embankment, and the force of water passing in this direction almost entirely demolished it, and deepened a channel considerably below the original surface. This embankment, which now contains seventeen thousand three hundred and eighty-five cubic yards, is larger and higher than the former one, and is considered entirely out of danger.

Last spring, the waters of Newtown creek broke through the bank of the canal on the summit level, where an opening had been made to let the water into the canal to saturate the earth, and which had been imperfectly closed. The unfinished work at the locks on both ends of the summit level, was considerably injured.

The Chemung canal is thirty-six miles long, and has 516 feet of lockage. The following exhibit will show the entire cost of this canal; the different structures, and their cost; the number of cubic yards of excavation and embankment, and the average price per cubic yard:

52 locks, comprising 516 ft. lockage, have cost	\$84,131 59
This sum includes the estimated allowance in consequence of the alteration of plan.	
1,175,963 cubic yards of excavation, at an average price of 9 cents 8 mills per cubic yd.	115,399 70
533,912 cubic yards of embankment, average price 10 cents 2 mills.	51,499 02
7,220 cubic yards of slope wall.	3,468 54
28,775 feet of docking.	1,551 24
6,303 rods of fence.	3,151 50
1,423 rods of fence removed to the canal.	241 91
27 farm bridges.	2,302 75
32 road bridges.	3,792 48
17 farm bridges, from the maintenance of which the State is released.	2,015 00
1 guard-lock.	1,497 40
Dam across the Chemung river.	5,721 26
Chute in said dam, to accommodate the river navigation.	1,457 59
Grubbing and clearing.	9,605 00
Lining canal.	1,185 00
3 aqueducts.	3,697 13
6 waste-weirs.	477 60
5 culverts.	729 40
4 lock-houses.	992 00
908 rods of towing-path on inlet.	2,724 00
Altering mill-dams and floors.	575 00
Removing buildings and saw-mill.	505 00
Land for lock-houses.	120 00
Pier at the intersection of the canal with the Seneca lake.	1,164 91
Altering and making roads.	1,172 50
Expenses of engineer department.	12,800 00
Conductors around locks.	249 37
Miscellaneous works.	2,434 36
	\$314,395 51

The preceding remarks will indicate that the expenses for repairs could not have been inconsiderable, and they are principally applicable to expenses growing out of the floods of last spring, and the difficulties on sections two and three; though a portion (and not an unusual amount) is applicable to contingencies, which on all occasions rest on new and untried works, when the searching operation of water is first experienced.

The sum expended for repairing and maintaining this canal and its appendages, from the period that the several parts of it were taken from the contractors and declared finished by the engineer, to the first of January instant, amounts to \$12,953.90; and the estimated expense of putting the locks in a condition for navigation by the first day of May next, is \$3,000.

The following statement will shew the probable condition of the fund on the first day of April next, which is applicable to the construction of the Chemung canal, its maintenance, and the payment of interest on the loans which have been made, to wit:

Cost of the canal.	\$314,395 51
Disbursements for repairs previous to the first of December last.	12,953 90
Estimated expense of repairing and strengthening locks.	8,000 00
Estimated expense of ordinary repairs to the first day of April next.	500 00
	\$335,849 41
Amount of loans.	\$290,263 00
do authorized to be loaned.	25,737 00
do rec'd for premiums on loans.	36,873 71
do do interest on deposits.	5,949 30
	\$358,823 01
To am't paid for int.	\$28,644 74
To interest due the last next May.	4,837 72
	33,482 46
	345,340 55
	\$10,508 86

By the preceding statement it will be seen, that it becomes necessary to make provision for the sum of \$10,508.86, to meet the expenditures now in progress on the canal; and also for its maintenance to the first day of April next.

It will readily be seen, that any estimate which may be made of the expenses for the next spring repairs, and during the season of navigation, must proceed from a very uncertain data. It is presumed, however, that about \$6,000 would be sufficient to meet the ordinary expenses for repairs; but it is proper to remark that this sum might be very much increased by the spring floods.

There are twenty-nine claims for damages now on file; and the entire uncertainty of the amount which may be awarded by the appraisers, precludes the practicability of submitting an estimate.

#### CROOKED LAKE CANAL.

At the date of my last report in relation to this canal, arrangements had been made to prosecute the work during the winter; and its completion last fall was confidently expected. The unfavorable winter and spring retarded the progress of the work, and less was done during this period, than had been anticipated. The extensive public works in progress in the State of Pennsylvania last season, attracted the attention of laborers on this canal; and early last summer it was discovered that many were leaving for that State, under the expectation probably of obtaining higher wages, and a more extended employment. Nearly all the laborers on the public works in this country are foreigners, who have no fixed residence; and it is very common for these men to concentrate from various parts of the country at the commencement of a new work of any considerable magnitude; hence arises the difficulty of retaining men on a work of short duration, or when nearly completed. These facts were illustrated at the commencement and in the progress of the Chemung and Crooked Lake canals. At the commencement of the former work, laborers were plenty, and the average price did not exceed ten dollars per month. The second year laborers grew more scarce, and the prices advanced to fourteen dollars per month; while the contractors on the Crooked Lake canal, which had just commenced, paid only twelve dollars per month. The facility of procuring laborers depends very much on the magnitude of the work, and the probable extent of the employment.

The contractors on this canal appeared to manifest a willingness to prosecute their work with proper diligence, and they made efforts to procure men by sending agents and printed notices into other parts of the State, offering liberal wages. With perhaps a single exception, the contractors possess character and responsibility, and a general confidence seemed to prevail, until in the month of October, the surviving partner of a contract for two miles of this canal failed in paying his men. He was a foreigner who had great influence with his countrymen, and so far succeeded in obtaining their confidence, as to protract his payments, until his indebtedness exceeded \$3,000. This occurrence so exasperated some of his men, that after taking from him every vestige of moveable property, and setting fire to his shanties, they left the country. This affair had an unfavorable influence through the whole line of canal, and interrupted the progress of the work. It is due, however, to this contractor to say, that he had prosecuted his work with proper diligence, and that a portion of his excavation was very expensive. He no doubt persevered with an intention of finishing all his work, under the expectation of obtaining an allowance on a part of it. The sureties of this contractor, immediately after his failure, made arrangements for the completion of the unfinished work.

The excavation on a part of this canal is hard pan of an expensive character, and in almost every lock-pit this material or rock is found. This circumstance has served materially to protract the progress of the work.

The line of this canal, in passing down the

narrow valley of the outlet of Crooked lake, was in many places located near the foot of a steep side hill, into which an excavation was made to form the towing path embankment. This was rendered necessary, for the purpose of avoiding any interference with the mill-ponds, which in a few instances occupy almost the entire width of the valley. The soil in some places indicates a quick sand, and last spring when the frost disappeared, and while the earth continued saturated with water, a considerable quantity slipped and run into the canal, where it had been excavated.

In penetrating the rock on section 6, it was found that the seams between the horizontal strata were very open, and full of cavities, which rendered it necessary to excavate wider and deeper, for the purpose of receiving a lining on the bottom and sides of water-tight materials. To secure the water in a short pound reach which occurs on this rock, it became necessary to form the sides of it with a stone wall laid in water lime mortar. From the causes mentioned, the expense of this section will far exceed the original estimate.

In determining on the final location of the line on a part of section 4, at Way and Andrews' mills, it was found very difficult to pass in a narrow and circuitous route, between dwelling houses and mills, where the line was first located; and the only alternative which appeared to present itself was to remove a dwelling house or change the location of the line. The latter course was adopted, and it has increased the amount of excavation at this point about 8,000 cubic yards.

The estimate for the construction of this canal was predicated on banks six feet high, with the usual width at the top, and a slope of one foot rise to every one and a half feet of horizontal base. The short pound reaches between many of the locks render the banks liable to be overflowed by the irregular admission of water, which sometimes unavoidably occurs. The line of canal, as has been before observed, is located throughout its almost entire extent, near to, and at the foot of a steep side hill, and is subject to sudden inundations from the quantity of water which may be thrown into it by a heavy fall of rain. In addition to waste-weirs, it was considered necessary to construct the upper gates no higher than the top water line in the canal when at a proper level, in order to aid in discharging the surplus water; and also to raise and enlarge the banks, to afford the necessary strength and security. The banks are generally seven feet higher, and have a slope of one foot rise to two feet of horizontal base.

The guard lock which connects the canal with the water of the Crooked lake, was unavoidably located in a very contracted place, in a deep excavation of clay, with a saw-mill on one side of it and a high bank on the other. These circumstances, connected with the design of the lock to serve as a guard to the water of the lake above it, rendered it entirely proper, both in reference to economy and security, to make this a more permanent structure than was originally designed.

The bottom of the lock near the intersection of the canal with the Seneca lake, is excavated about five feet below the surface of the water in the lake at its ordinary state, and was an expensive work to execute. The plan of this lock has been changed at a small additional expense, so that in rebuilding it at any future period, it will not be necessary to remove any part of the work below the surface of the water. The locks are made similar to those on the Chemung canal, and will require the same additional bracing, bolting, and dry wall, in order to give them sufficient strength.

Sections 7 and 8 are completed; sections 1, 2, 3 and 5 can be finished early in the spring; sections 4 and 6, on which the greatest amount of excavation remains to be done, will be prosecuted through the winter; the locks are all framed, twenty have been raised, and to most of these the masonry and dry wall is nearly completed; and such arrangements have been made in relation to all the unfinished work, as justifies the opinion, that the canal will be ready for navigation about the first of July next.



The report of the Canal Commissioners to the Legislature in relation to this canal, previous to the time when the work was put under contract, stated "that the character of the line of this canal was such that it would be difficult to foresee all the expenses necessary to afford proper security and protection to the work;" and it expressed the opinion "that the estimated allowance for contingencies would prove insufficient." This prediction has been verified. It now appears from an estimate recently furnished, that the number of cubic yards of excavation and embankment have been materially increased, and that other unforeseen circumstances have arisen. Most of the rock excavation was covered with earth when the original estimate was made, and the amount could not be ascertained with certainty. The amount of rock excavation now estimated, exceeds that in the former estimate, by 9,617 cubic yards.

The present estimated cost of this canal is \$136,101.17, making an excess over the sum appropriated, of \$16,101.18; which exceeds the original estimate of the engineer, \$16,903.17; and the estimate on the prices for which it was proposed to construct this canal, submitted previous to the consummation of the contracts, \$33,778.17.

The last excess has arisen as follows, to wit:

116,350 c. yds. of earth excavation at 8 cts. per cubic yard.....	\$9,308 00
84,849 do do embankment, at 9 cts.....	7,591 41
1,587 do do rock excavation at 27 do.....	587 19
8,030 do do do at 60 do.....	4,818 00
Additional expense by reason of a change of plan in guard-lock.....	1,504 00
Extra allowance on 27 locks on account of alteration in plan.....	2,830 14
Extra allowance on lock near Seneca lake.....	390 00
2,200 c. yds. of lining and expense of preparation on rock, section No. 6.....	540 00
4,500 c. yds. of quick sand shipped and run into canal, on section 2.....	360 00
8,000 c. yds. of do on section 6.....	640 00
Way and Andrews' mills.....	630 00
Increased expense in constructing piers in Seneca and Crooked lake.....	314 40
Additional expense of docking.....	2,025 28
Increased expense to 27 locks for the purpose of giving them sufficient strength, and for lining locks.....	3,780 00
Wall of masonry on section 6.....	375 00
Additions in bridges and waste-weirs.....	309 00
do to the expense of engineer depart.....	2,257 00
do for removing buildings, bridges, &c.....	1,744 00
	\$40,053 42

From this amount should be deducted, on account of work included in the estimate referred to, now intended to be omitted,

3 lock-houses.....	\$840 00
Culverts.....	75 00
Fences.....	360 00
	1,275 00

By the preceding statement, it will be seen that about one half of the excess consists in an increase of earth and rock excavation, and embankment. The preceding remarks have shown that the banks of the canal have been materially enlarged, which accounts for the greatest portion of this increase. The number of yards of excavation in the channel of the outlet between the guard-lock and dam, and the lake, has also been increased. The banks in several places are located in the outlet, and mill-ponds; and it seems probable that sufficient care may not have been exercised by the engineer, in ascertaining the quantity of embankment in these places.

The following statement will show the state of the fund applicable to this canal, and the charges upon it, to wit:

Cost of constructing canal.....	\$136,101 17
Amount loaned.....	\$100,000 00
Amount authorized to be loaned.....	20,000 00
	120,000 00
	16,101 17
Amount of interest paid.....	\$7,787 67
Am't of interest rec'd on deposit.....	3,506 78
	4,270 89
	\$20,382 06

Leaving a balance against the fund of \$20,382.06. This fund will be farther chargeable with the interest payable after this period, the contingencies resting on a completion of the work, and the maintenance of the canal and its appendages when completed.

WILLIAM C. BOUCK.

January 17, 1833.

Statement A shows the amount of tolls received by the several collectors on the Erie, Champlain, Oswego, and Cayuga and Seneca canals, for the years 1829, 1830, 1831 and 1832, and also the increase and diminution at each place for the years 1831 and 1832.

B, is a statement of property which passed Utica on the Erie canal, during the years 1830, 1831 and 1832, and exhibits the increase and decrease of the several articles enumerated for the years 1831 and 1832.

C, shows the amount of property cleared at Buffalo and passing east on the Erie canal, in

the years 1830, 1831 and 1832, and also an account of property which has arrived at Buffalo in the same years, designating that which has arrived from and departed to other States.

D, is a statement of property arriving at Whitehall, on the Champlain canal, and passing north, in 1832; and also a statement of property cleared at Whitehall, on the Champlain canal, south, during the season of 1832.

E, is an account of property passing through the Glen's-Falls feeder, towards tide-water, and the amount of toll received thereon at Fort-Edward, during the year 1832.

#### A.

STATEMENT showing the Amount of Tolls received by the several Collectors on the Erie, Champlain, Oswego, and Cayuga and Seneca Canals, for the years 1829, 1830, 1831, and 1832; and also, the Increase and Diminution at each place for the years 1831 and 1832.

#### ERIE AND CHAMPLAIN CANALS.

PLACES OF COLLECTION.	Collected in 1829.	Collected in 1830.	Collected in 1831.	Collected in 1832.	Increase over 1831.	Decrease from 1831.
Albany.....	\$161,443 69	212,044 82	269,443 73	236,636 32		32,807 41
West-Troy.....	85,259 46	124,771 46	169,458 19	160,329 28		9,128 91
Schenectady.....	29,671 96	37,805 98	35,700 56	37,794 95	2,094 39	
Little-Falls.....	9,648 21	8,670 97	9,685 78	15,023 12	5,337 34	
Utica.....	42,122 33	46,142 10	41,012 61	47,046 78	6,034 17	
Rome.....	23,956 78	28,835 26	28,680 79	35,547 14	6,866 35	
Syracuse.....	60,752 69	85,876 30	66,144 82	94,916 24	28,771 42	
Montezuma.....	66,701 63	75,845 74	65,570 15	73,288 99	7,718 84	
Lyons.....	27,733 55	24,229 18	20,539 46	25,278 85	4,739 39	
Palmyra.....	44,845 71	48,337 94	55,776 33	59,434 78	3,658 45	
Rochester.....	98,518 17	150,128 83	174,350 90	154,541 08		19,809 82
Brockport.....	10,150 26	12,313 52	10,750 82	13,025 81	2,274 99	
Albion.....	12,019 99	12,138 95	10,993 94	10,219 43		774 51
Lockport.....	12,503 42	21,553 24	31,023 19	28,433 22		2,589 97
Buffalo.....	25,957 38	48,958 64	66,009 19	58,232 09		7,777 10
Geneva.....	11,402 43	31,478 29	27,742 98	29,333 69	1,590 71	
Waterford.....	16,305 75	9,775 17	9,667 34	17,338 18	7,719 84	
Sloop-Lock.....	928 73	752 12	766 15	1,091 59	325 44	
Fort-Edward.....	10,516 23	11,766 49	15,054 17	16,249 85	1,195 68	
Whitehall.....	44,617 10	41,051 68	46,879 09	50,357 21	3,478 12	
Salina.....			39,360 30	31,839 52		7,520 78
	\$759,055 52	\$1,032,476 68	\$1,194,610 49	\$1,196,008 12	\$81,805 13	\$80,407 50

#### OSWEGO CANAL.

Salina.....	7,533 35	8,662 32	11,684 23	11,935 68	251 45	
Oswego.....	1,906 09	3,672 86	4,586 87	7,850 52	3,263 65	
	\$9,439 44	\$12,335 18	\$16,271 10	\$19,786 20	\$3,515 10	

#### CAYUGA AND SENECA CANAL.

Geneva.....	4,100 22	5,223 39	5,246 34	6,459 18	1,212 84	
Montezuma.....	4,543 27	6,764 42	7,674 05	7,435 50		338 55
	\$8,643 49	11,987 81	12,920 39	13,894 68	1,212 84	338 55

#### SUMMARY OF THE PRECEDING STATEMENT.

Erie and Champlain Canal.....	795,055 52	1,032,599 13	1,194,610 49	1,196,008 12	1,397 63	
Oswego Canal.....	9,439 44	12,335 18	16,271 10	19,786 20	5,515 10	
Cayuga and Seneca Canal.....	8,643 49	11,987 81	12,920 39	13,894 68	974 29	
Total.....	\$813,138 45	1,056,922 12	1,223,801 98	1,229,689 00	5,887 02	

#### B.

The following Statement of Property which passed Utica, on the Erie Canal, during the years 1830, 1831 and 1832, exhibits the increase and decrease of tonnage of the several articles enumerated in the years 1831 and 1832.

ARTICLES.	1830.	1831.	1832.	Increase over 1831.	Decrease since 1831.
Domestic spirits..... galls.	1,812,918	1,472,685	1,537,690	64,995	
Shingles..... m	20,786	28,819	50,453	21,643	
Sawed lumber..... feet.	21,257,490	31,132,086	31,354,027	221,941	
Timber.....	262,453	691,215	851,022	159,797	
Staves.....	6,009,000	8,586,237	7,341,018		1,245,219
Flour..... bbls.	532,464	609,254	631,497	22,243	
Provisions.....	36,982	31,448	42,216	10,768	
Salt.....	75,112	69,754	66,651		3,103
Ashes.....	34,752	28,437	28,810	373	
Lime.....	11,220	15,596	34,610	19,014	
Beer.....	595	355	205		150
Cider.....	124	2,181	435		1,746
Wood..... cords.	3,556	2,927	3,826	899	
Wheat..... bush.	714,406	411,424	645,340	233,916	
Coarse grain.....	237,147	183,938	160,677		23,261
Bran and ship stuff.....	96,380	273,397	161,204		112,193
Peas and beans.....	5,724	2,413	15,072	12,659	
Grass seed..... lbs.	1,212,896	1,354,874	1,282,222		72,652
Wool.....	526,462	1,025,321	719,444		305,877
Cheese.....	1,727,403	1,677,209	1,233,586		443,623
Butter and lard.....	2,216,609	2,713,465	3,548,045	834,580	
Hops.....	396,248	148,749	337,495	188,746	
Furs and peltry.....	284,069	329,568	200,890		128,678
Gypsum.....	4,829,557	8,083,600	8,072,104		11,496
Stone.....	7,871,661	17,088,146	7,987,232		9,100,914
Merchandise.....	89,931,254	122,039,775	116,126,047		5,913,728
Furniture.....	6,612,624	7,215,556	7,679,343	463,687	
Coal.....		2,578,062	3,101,603	523,541	
Pig iron.....		1,533,370	1,841,569	308,199	



**C.**  
Account of Property cleared at Buffalo and passing east on the Erie Canal, in the years 1830, 1831, and 1832, and also an account of property which has arrived at Buffalo in the same years, designating that which has arrived from, and departed to, other States.

ARTICLES.	From Buffalo east.	From other States east.	Total.	Arrived at Buffalo.	From Buffalo west to other States.	Total.	From Buffalo east.	From other States east.	Total.	Arrived at Buffalo.	From Buffalo west to other States.	Total.	From Buffalo east.	From other States east.	Total.	Arrived at Buffalo.	From Buffalo west to other States.	Total.	Increase from other States east, of 1832 over 1831.	Decrease from other States of 1832 over 1831.
Wheat.....bush.	1830. 2,117	1830. 146,042	148,319	1830. 2,117	1830. 146,042	148,319	1831. 12,750	1831. 173,368	186,118	1831. 12,750	1831. 173,368	186,118	1832. 229	1832. 100,335	100,761	1832. 229	1832. 100,335	100,761	1832. 229	1832. 100,335
Flour.....bush.	5,280	23,320	28,600	5,280	23,320	28,600	5,280	67,110	72,390	5,280	67,110	72,390	4,530	4,530	4,530	4,530	4,530	4,530	4,530	4,530
Beef.....do	20	5,130	5,150	20	5,130	5,150	57	4,723	4,780	57	4,723	4,780	359	163	170	359	163	170	359	163
Whiskey.....do	386	3,562	4,162	386	3,562	4,162	634	3,096	3,730	634	3,096	3,730	194	2,014	2,208	194	2,014	2,208	194	2,014
Oil.....do	2	799	801	2	799	801	37	1,353	1,360	37	1,353	1,360	44	44	44	44	44	44	44	44
Pigs.....do	3,601,309	2,742,918	6,338,233	3,601,309	2,742,918	6,338,233	1,792,743	3,232,694	5,025,437	1,792,743	3,232,694	5,025,437	2,346,821	4,201,327	6,548,148	2,346,821	4,201,327	6,548,148	2,346,821	4,201,327
Household furniture, do	161,027	164,027	325,054	161,027	164,027	325,054	192,731	115,726	308,457	192,731	115,726	308,457	214,134	214,134	428,268	214,134	214,134	428,268	214,134	214,134
Horses.....do	117,350	611,350	728,700	117,350	611,350	728,700	984,309	884,309	1,868,618	984,309	884,309	1,868,618	936,889	936,889	1,873,778	936,889	936,889	1,873,778	936,889	936,889
Hides.....do	117,430	163,430	280,860	117,430	163,430	280,860	157,945	656,327	814,272	157,945	656,327	814,272	176,385	176,385	352,770	176,385	176,385	352,770	176,385	176,385
Pig iron, do	1,616	828,432	830,048	1,616	828,432	830,048	866,237	819,932	1,686,169	866,237	819,932	1,686,169	830,635	830,635	1,661,270	830,635	830,635	1,661,270	830,635	830,635
Stone, do	21,683	248,644	270,327	21,683	248,644	270,327	4,036	406,146	410,182	4,036	406,146	410,182	1,531,546	1,531,546	3,063,092	1,531,546	1,531,546	3,063,092	1,531,546	1,531,546
Tallow, do	81,980	81,980	163,960	81,980	81,980	163,960	248,884	248,884	497,768	248,884	248,884	497,768	149,677	149,677	299,354	149,677	149,677	299,354	149,677	149,677
Rags, do	77,515	77,515	155,030	77,515	77,515	155,030	19,853	19,853	39,706	19,853	19,853	39,706	8,062	8,062	16,124	8,062	8,062	16,124	8,062	8,062
Grindstones, do	464,000	464,000	928,000	464,000	464,000	928,000	240,361	240,361	480,722	240,361	240,361	480,722	201,229	201,229	402,458	201,229	201,229	402,458	201,229	201,229
Lumber, do	28,125	28,125	56,250	28,125	28,125	56,250	566,000	566,000	1,132,000	566,000	566,000	1,132,000	147,825	147,825	295,650	147,825	147,825	295,650	147,825	147,825
Merchandise, do	5,945,645	2,129,781	8,075,426	5,945,645	2,129,781	8,075,426	23,711	150,928	174,639	23,711	150,928	174,639	9,340,378	16,971,121	26,311,500	9,340,378	16,971,121	26,311,500	9,340,378	16,971,121
Western plaster, do	75,270	75,270	150,540	75,270	75,270	150,540	132,550	132,550	265,100	132,550	132,550	265,100	28,001	28,001	56,002	28,001	28,001	56,002	28,001	28,001
N. S. plaster, do	132,550	132,550	265,100	132,550	132,550	265,100	9,119	28,790	37,909	9,119	28,790	37,909	43,695	43,695	87,390	43,695	43,695	87,390	43,695	43,695
Pig iron, do	674,739	5,282,768	5,957,507	674,739	5,282,768	5,957,507	674,739	5,282,768	5,957,507	674,739	5,282,768	5,957,507	674,739	5,282,768	5,957,507	674,739	5,282,768	5,957,507	674,739	5,282,768
Stone, do	21,408	21,408	42,816	21,408	21,408	42,816	21,408	21,408	42,816	21,408	21,408	42,816	21,408	21,408	42,816	21,408	21,408	42,816	21,408	21,408
Hides, do	180,307	180,307	360,614	180,307	180,307	360,614	180,307	180,307	360,614	180,307	180,307	360,614	180,307	180,307	360,614	180,307	180,307	360,614	180,307	180,307
Pig iron, do	701,918	701,918	1,403,836	701,918	701,918	1,403,836	254,631	254,631	509,262	254,631	254,631	509,262	100,142	100,142	200,284	254,631	254,631	509,262	254,631	254,631
Stone, do	100,142	100,142	200,284	100,142	100,142	200,284	100,142	100,142	200,284	100,142	100,142	200,284	100,142	100,142	200,284	100,142	100,142	200,284	100,142	100,142
Hides, do	8,167	8,167	16,334	8,167	8,167	16,334	8,167	8,167	16,334	8,167	8,167	16,334	8,167	8,167	16,334	8,167	8,167	16,334	8,167	8,167
Pig iron, do	45,000	45,000	90,000	45,000	45,000	90,000	45,000	45,000	90,000	45,000	45,000	90,000	45,000	45,000	90,000	45,000	45,000	90,000	45,000	45,000
Merchandise, do	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435	3,620,870	1,810,435	1,810,435
Western plaster, do	387,623	387,623	775,246	387,623	387,623	775,246	387,623	387,623	775,246	387,623	387,623	775,246	387,623	387,623	775,246	387,623	387,623	775,246	387,623	387,623

**D.**  
A Statement of property arriving at Whitehall, on the Champlain Canal, and passing north, in 1832.

ARTICLES.	Whole amount.	To Vermont.	To Canada.
Ashes.....bbls.	5		
Beer.....do	42	10	
Beef and pork, do	4,260	63	3,105
Flour.....do	24,780	11,103	43
Western salt, bush.	86,025	51,005	
Foreign do, do	5,875	3,453	
Agricultural products, pounds.	338,095	141,790	22,461
Brick, clay, sand, &c. ....pounds.	795,192	311,465	
Buffalo robes and deer skins.....pounds.	87,212	1,665	77,861
Coal.....do	565,061	213,311	
Cotton.....do	195,806	147,641	1,311
Household furniture, do	107,121	9,650	
Horses.....do	6,600		
Hides.....do	981,242	193,764	564,725
Merchandise, do	16,129,274	8,411,324	1,309,867
Western plaster, do	566,672	271,496	
N. S. plaster, do	499,939	232,012	6,600
Pig iron, do	424,267	178,694	
Stone, do	391,167	108,407	
Tallow, do	398,713		311,761
Rags, do	11,200		
Hogs, do	8,000		8,000

A Statement of the property cleared at Whitehall, on the Champlain Canal, south, during the season of 1832.

ARTICLES.	Whole amount.	From Vermont.	From Canada.
Ashes.....bbls.	992	135	
Beef and pork, do	5,074	4,062	
Charcoal.....bush.	3,360		
Grain.....do	17,600	12,321	
Domestic spirits, gal.	109,124	80,120	
Glass, do	10,095	3,521	
Agricultural productions, pounds.	257,283	178,143	
Butter & cheese, do	1,233,647	1,103,335	
Copperas, do	85,080	85,080	
Furs and peltry, do	16,140	1,225	10,533
Household furniture, do	338,993	122,269	112,237
Hoop-poles and lath, do	1,699,036	522,675	
Iron and nails, do	3,501,734	255,160	
Iron ore, do	480,620		
Iron castings, do	19,180	13,250	
Leached ashes, do	70,000		
Manganese, do	227,305	227,305	
Merchandise, do	126,700	83,654	
Rags, do	13,920	2,100	9,327
Starch, do	198,514	198,514	
Stone, wrought, do	1,346,399	1,116,261	
Sand, do	314,800	127,347	
Staves and heading, do	165,353	63,000	
Sundries, do	300,611	168,175	
Wool, do	412,961	326,173	
Paper, do	139,490	76,850	
Sawed lumber, feet.	53,075,647	5,103,160	700,654
Timber, do	736,495	245,150	
Shingles, do	4,026	123	
Wood, do	4,536	165	
Post and rails, do	471		

**E.**  
An Account of Property passing through the Glen's-Fall feeder towards tide-water, and the amount of tolls received thereon at Fort Edward, during the year 1832.

Sawed lumber.....feet	7,528,483
Square and round timber.....cords	129,604
Wood.....cords	5,553
Lime.....lbs.	706,507
Staves.....	818,500
Merchandise.....	161,835
Stone (entirely unwrought).....	278,000
Agricultural productions.....	3,456
Hoop-poles.....	100,700
Potash.....	30,600
Butter and lard.....	16,859
Castings (iron).....	2,400
Lath (less than 5 feet in length).....	42,000
Sawed marble.....	169,439
Furniture.....	33,576
Pork.....	700
Shaved hoops.....	8,250
Rails 3,200, posts 5,370.....	8,570
Shingles.....m	6264

Amount of toll received, \$7,803 99.  
FELIX ALDEN, Collector.  
Collector's Office,  
Fort Edward, Dec. 8, 1832.

**Improved Method of Using Wheel-Drags.** By W. BADDELEY. [From the London Mechanics' Magazine.]

Passing down Ludgate-hill the other evening, I noticed a very heavily laden west-country waggon going down the hill with one of the wheels locked; the consequence of which

was, that the friction of the wheel upon the stones caused the evolution of considerable heat, which dried up the road in the track of the wheel, and at length produced a charring of the felines, as was shown by the escaping of small quantities of smoke, accompanied with a strong smell of burning wood. On reaching the bottom of the hill, I went up to the waggon and found that it was furnished with a proper shoe or drag, but that the driver chose to lock the wheel in preference to using the drag. The reason appeared to be, that the former was the easier method; for if the shoe had been used, it would have been necessary to back the waggon out of it, whereas the locking chain was disengaged in an instant, by simply striking off a ring.

Few persons are perhaps aware of the extent to which wheels are continually injured by this practice; first, by the actual wear of the iron tire; and, secondly, by the mischievous effects of the heat upon the wooden felines. I have repeatedly observed on Ludgate and Holborn hills, and other places, both in town and country, that unfortunately this is a regular practice, partly arising from laziness, and in part from the real difficulty of backing a loaded vehicle out of the drag.

It has therefore occurred to me, that a very simple remedy may be provided for this evil, by rendering the use of the shoe as convenient as the locking-chain. And this may be done in several ways: thus, for instance, by using a drag-chain of such a length as to permit the wheel to roll off it, and to take it up short enough to carry the wheel, when it is to be dragged by the same simple fastening at present used for the locking chain; viz. a ring sliding on a bent pin. In this way the drag may be used, and when the vehicle reaches the bottom of the hill it may be instantly and easily disengaged, and when the wheel has rolled off may be hooked up out of the way. Or the shoe may be permanently fixed by a chain behind the wheel, and connected with the chain-drag, when required, in the way before mentioned; when done with, it may be disengaged from the drag-chain and replaced behind the wheel.

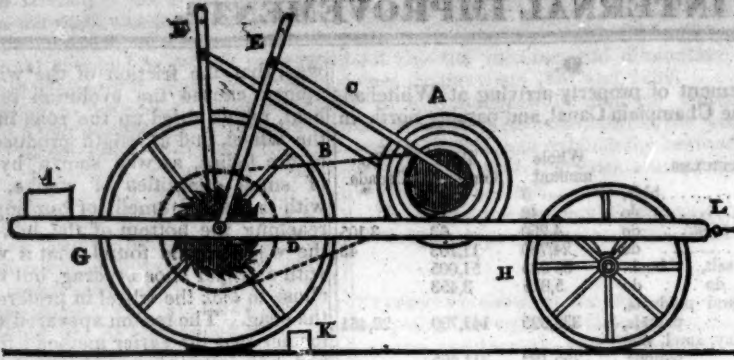
**Improved Method of Aquatinta Engraving.** By MECHANICUS. To the Editor of the Mechanics' Magazine and Register of Inventions and Improvements.

SIR,—If the following short account of the method of effecting aquatinta engraving is thought worthy of a place in your valuable publication, it is at your service.

After the intended figure is outlined, by etching or otherwise, the plate is covered all over with a ground of rosin, Burgundy pitch, or mastic, dissolved in rectified spirits of wine; this is done by holding the plate in an inclined position, and pouring the above composition over it. The spirit of wine almost immediately evaporates, and leaves the resinous substance in a granulated state, equally dissolved over every part. The granulations thus produced, if examined through a magnifying-glass, will be found extremely regular and beautiful. When the particles are extremely minute, and near to each other, the impression from the plate appears to the naked eye exactly like a wash of Indian ink; but when they are larger, the granulations appear more distinct. This powder or granulation, is called the aquatinta grain. The plate is next heated to make the powder adhere; and in those parts where a very strong shade is wanted, it is scraped away; but where strong lights are wanted, a varnish is applied. The aqua fortis, properly diluted with water, is then put on with a piece of wax, as in common etching or engraving; and by repeated applications of this process, scraping where darker shades are required, and covering the light parts with varnish, the final effect is produced.

Engraving by aquatinta was invented by Le Prince, a French artist, by whom the process was long kept secret. It is even said that for some time he sold his prints, (which are still reckoned excellent specimens,) for drawings.





[From the London Mechanics' Magazine.]

**PROOF OF THE ADVANTAGES OF LONG LEVERS IN LOCOMOTIVE MACHINES.**—Sir: I had written separate replies to most of the opponents of my theory of locomotion; but, finding in their papers so much truth intimately mingled with so much error, I perceived my remarks were, and must be, far more extended than I wished them to be, or than your pages would reasonably permit. I therefore thought all useful purposes would be answered by sending the following conclusions, arrived at by the various reasonings of your correspondents, and by multiplied experiments of my own, by which they will see how far I am convinced of the truth of what they have advanced, and how far I retain my original opinions: such are the beneficial uses of discussion.

**Conclusions.**—1. That my 8th proposition, vol. 15, page 44, is virtually admitted, and that the fulcrum of locomotion is the ground. This renders it unnecessary to send the promised drawing of a carriage, without spoke or axle, and here I particularly wish to give part of my intended answer to S. Y., page 94. He says, "the difficulty of obtaining those outward abutments" is the great obstacle. I agree with him, that it is one great difficulty, that is to obtain abutments of sufficient hold or strength; he wants an iron cog rail, to use a great force at, with a short lever; but that a common road will never furnish; the abutments must be taken as they are; and by using a long lever and light power in emergencies, those abutments may be made, in all useful cases, sufficient; instance, a ton-weight, balanced on an equal armed lever, will require another ton, therefore the fulcrum or abutment will carry and be forced by 40 cwt.; but if you balance the ton on a 20 to 1 armed lever, the fulcrum will only be forced by 21 cwt. and may hold when it would not with 40 cwt. This I consider a good and true illustration, in some cases, of the force of long levers on my locomotive fulcrums, and of the advantage of such levers.

2. That my 9th proposition is not to be considered as an universal one, because a locomotive machine may be worked by levers of the second order, as well as by those of the first order, as is exemplified below.

3. That an open-topped steam cylinder has a different effect on a locomotive machine to a close-topped cylinder is again different in its power of locomotive action to a horizontal one, and that the action of spur or bevil gearing is different in effect to the action of cranks of the same radius.

4. That my 5th proposition is only partially correct, being right in some cases and wrong in others; consequently, that the theory of the application of power in various ways to a locomotive machine must be divided into two or more classes, each class embracing two or more orders, which classification I shall hereafter describe. The following leading principle, mentioned vol. 15, page 150, I think includes all classes: "There cannot be advancing motion produced by any machine, animate or inanimate, unless the power attempting to produce such motion can ply against an abutment or fulcrum that is either immovable or much

more slowly moving than such power of advancing motion."

5. That a short lever can effect on cog-rails, that which it is impossible for it to effect on a plain road with plain wheels.

6. (And which is the burden of all from the beginning.) That gearing of long radius will practically pass a locomotive machine with plain wheels through difficulties which gearing of short radius cannot do.

Any remarks upon these conclusions I shall be happy to peruse, and to reply to; and if I have not heretofore written under such equanimity of temper as some of your correspondents, it has arisen more from playfulness of spirit than from any unbecoming feeling, but I will restrain it in future.

I have long been trying to work a locomotive machine by a lever longer in its power-arm than the radius of the wheel, and am happy to send you particulars of a successful experiment to that effect. The singular motion of a pin on the rim of a coach wheel has often been remarked, and the nature of the cycloidal curve explained, but until the promulgation of the wheelbarrow problem, vol. 14, page 191, I do not know that the locomotive advantages of this curve have ever been known or applied. In making a complete revolution of a locomotive wheel, the point that first touched the ground moves forward the same distance that the axle does (see page 8); but in moving this distance, it first proceeds very slowly, then very rapidly, then slowly again, so that the top of a wheel is always advancing very much faster than the bottom. In making only one-eighth of a revolution, the top starting point of the wheel will have advanced more than 12 times as far as the bottom starting point—consequently, by constantly making the top of the wheel the place of the power, and constantly making the bottom of the wheel (as it is) the place of the fulcrum, and the axle the place of the locomotive resistance (as in a second class lever), a small power may be made to have a great effect, as in the wheelbarrow problem, especially if the top radius of the wheel can be lengthened without lengthening the bottom. This, as the following experiment shows, may be done, and in theory may be done without limit, so that a power (abating friction), however small, may be made to locomote a weight, however large, over an obstacle of any definite height. Can Science do more for locomotion than this?

Let A be a locomotive power (I used a strong spiral spring) turning a wheel carrying two or more, if needful, pins, BC, two or more connecting rods working on these pins.

D, two or more ratchet wheels fastened to the axle of the carriage wheels, E, F, two or more main levers pulling round the ratchet wheels one way only, and slipping the other way.

G, H, wheels of the locomotive carriage.

I, a balance weight to keep plenty of pressure on the ground and obstacle K.

N. B.—This weight must be particularly attended to, if any one repeats the experiment.

Now, the motion of the spring wheel, A, alternates the main levers, and propels the carriage, something like the little predominate vehicles described in Treatises on Mechanics, but

on quite a different principle as regards situation and leverage. The longer these main levers are the less power will be requisite to effect the motion, and any obstacle can be locomoted over with plain wheels that the wheels will hold on without slipping. A carriage might be worked on good ground, with only the common power requisite for a level road, by any ordinary gearing (represented by the dotted lines,) and a pair or more of these levers, occasionally used, would take the carriage through any difficulty.

I placed the machine on a level plane, with an obstacle K under the power wheel equal to one-tenth the distance of the wheel. I then tried how much statumotive, or horse power, at L, must be exerted horizontally to draw the machine over the obstacle, and found it, say, 56; I next wound up the spring until it indicated a power equal to 56, and when the connecting rods, B C, were fastened to the levers E F, near to the full radius of the wheel, this power of 56 also locomoted the machine over the obstacle. Again I shifted the rods until they were attached to the levers, E F, considerably beyond the rim of the wheel, when a power on the spring, equal to 25, effected the locomotion over the obstacle, and I believe I could have lengthened the levers until a power of 5 or less, or even a fraction, would have effected the same locomotion (slower, of course.) Next I attached the rods to a short radius on the levers, when it required a power on the spring equal to 200 to effect locomotion over the obstacle.

This I consider a very successful experiment; forcibly showing the power and practical advantages of long levers in surmounting locomotive difficulties—as in extreme cases, we can have the leverage of large wheels without the incumbrance of their weight.

A permanent power of 25 might be amply sufficient for such a machine as this to carry; whereas, without a shifting leverage, it must carry a power of 200 or more to meet extreme cases. This little machine, with plain soled wheels, mounted an inclined plane, rising  $9\frac{1}{2}$  in 20, and with cogged wheels,  $12\frac{1}{2}$  in 20, thus out-triumphing the "Triumph," whose model's best performances, with plain wheels, only ascended a rise of about 7 in 20! the abutment being more forced at than in this machine.

I cannot become coach proprietor or common carrier; but I hope Mr. Gurney will be induced to try the effect of occasional long levers—he need not then fear any hill or newly made road that horses can travel upon. As I before stated, I see no obstacle to the success of steam carriages on common roads but their vast weight, in proportion to their power; and this obstacle I know not how to overcome without abatement of speed.

Yours, &c. SAXULA.

December 12, 1831.

**THE IRON OF BORNEO.**—The iron found all along the coast of Borneo is of a very superior quality, which every person must know who has visited Pontiana or Sambas. At Bangermassing, it is, however, much superior; they have a method of working it which precludes all necessity of purchasing European steel. But the best iron of Bangermassing is not equal to that worked by the rudest Diak; all the best kris-blades of the Bugis rajahs and chiefs are manufactured by them; and it is most singular, but an undoubted fact, that the farther a person advances into the country the better will be found all instruments of iron. Seljie's country is superior in this respect to all those nearer the coast; his golloks, spears, and kris-blades are in great demand.

There are forty-nine forges at work merely in the campong of Marpow, but the mandows and spears which he uses himself, and gives to his favorite warriors, are obtained further north. Those men live in a state of nature, building no habitations of any kind, and eating nothing but fruits, snakes, and monkeys, yet procure



this excellent iron, and make blades sought after by every Diak, whose hunting excursions have in view the possession of the poor creature's spear or mandow as much as his head, strange as it may sound.

Instruments made of it will cut through overwrought and common steel with ease. We have seen penknives shaved to pieces with them by way of experiment; and one day a wager of a few rupees having been made with Selje, that he would not cut through an old musket barrel, he without hesitation put the end of it upon a block of wood and chopped it to pieces without in the least turning the edge of the mandow.

In the sultan of Cotti's house there are three muskets, formerly belonging to Major Mullen's detachment, which are each cut more than half through in several places by the mandows of the party which destroyed them. This circumstance being mentioned to Selje, he laughed, and said that the mandows used on that occasion were not made of his iron, otherwise the barrels would have been cut through at every stroke.—[Abridged from an article in the Singapore Chronicle.]

**Remarks on Mr. White's experiments on the cohesion of cements, with a tabular view of their results, reduced to a common scale.** By B. BEVAN, Esq. [From the Philosophical Magazine and Journal.]

GENTLEMEN,—The papers on cements, communicated by Mr. White, and published in the Philosophical Magazine and Annals, N. S. vol. xi. pp. 264 and 333, are of considerable importance on account of the numerous facts they contain. They enable the architect and builder to know where, and in what manner, to apply the different kinds of cement, and the degree of stress which may safely be laid upon them.

A careful perusal of the numeral results will point out several common errors, in respect to the cohesive properties of Roman cement and pozzolano, under different modifications, and under various degrees of exposure to moisture.

And as you probably may be of opinion that an abstract of the results given in those papers, reduced to one common scale in a tabular form, may be acceptable to some of your readers, and save much time to individuals, I take the liberty of sending one.

		Cohesive strength per inch.	
Cement in bars,		lbs.	Mean.
Age 6 days,	1 dry - -	474	356
	2 variable -	360	
	3 wet - -	234	
Age 47 days,	1 dry - -	516	380
	2 variable -	564	
	3 wet - -	270	
Age 94 days,	1 dry - -	210	312
	2 variable -	618	
	3 wet - -	312	
Age 187 days,	1 dry - -	534	519
	2 variable -	708	
	3 wet - -	336	
Mean of the dry		433	356
variable		562	
wet		288	
With salt water,		924	312
With 51 per cent. of water,		330	
With 64 do. do.		215	
3 parts cement, 2 parts sand,		456	312
1 part cement, 1 part brickdust,		312	
Bricks,			
3 pts. cement, 2 sand, 6 months,		375	360
3 do. 2 ! - -		362	
All cement, - - - 9 months,		360	
Paving bricks, best sort, - -		253	194
Do. seconds, - - -		194	
Common building brick, London,*		43	
Common bricks, Soho, - - -		412	27
Brick cylinders,			
Laid in cement, - - -		27	
Laid in cement and sand, - -		58	48
		48	
		53	

# Brick piers,

Laid in cement, 2 parts,	1 month	4 1/2
rough lime, 1 pt.		
sand, 1 1/2 parts,	6 weeks	7
pozzolano, 3 pts		
docking lime, 1 p		
pure cement, - - -		21
pozzolano, 1; stone		
lime, 1, - - -		8 1/2
Atkinson's cement, 1;		
sand, 1, - - -		25 1/2
ditto, - - -		49 1/2
cement, 4; lime, 1, - -		17

The apparent deficiency of strength in these experiments probably arose from the position of the resultant and strain in being on one side, instead of in the middle of the piers.

Force required to crush, per square inch.

P. 337.	lbs.
A 14 inch brick pier, laid in cement, -	470
Pozzolano, 3 parts; ground lime, 1,	296
Atkinson's cement, 1; sand, 1,	410
Pozzolano, 4; lime, 1, - -	638
Ditto, 3; Dorking lime, 1, - -	600
Stone-lime, 1; sand, 3, - -	500
Portland stone pier, - - -	2300

Yours, truly, B. BEVAN.

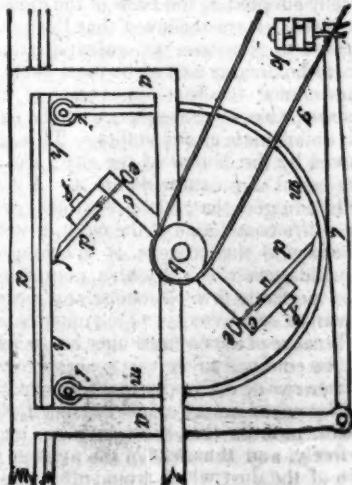
P. S.—From the disproportions between the cohesive strength of pure cement and cement used in brick work, it is desirable that further experiments should be made on this subject.

\* Stowbridge fire bricks have a strength of 790 lbs. per square inch. The bricks I used at Greenwich Well were made at Fenny Stratford, and would support 715 lbs. per square inch; equal to the strength of Yorkshire stone.

## ENGLISH PATENT.

Patent to M. MUIR, Engineer, for improvements in machinery for preparing Boards for Flooring, and other purposes. Granted December 22, 1831.

In the third volume of the present series of the "Register," page 65, we have described a machine, by this patentee, for performing at once the several operations of sawing, planing, grooving, and tonguing flooring boards, and his present patent is for an addition to the same, by which the boards are reduced to a uniform thickness, and therefore completed for laying on the joists. For this purpose the boards are laid upon their faces, or planed sides, and made to pass under a set of revolving adze cutters, by which they are reduced to uniform thickness. The annexed is a sketch of the revolving adzes, where a a a show a cast iron frame, with a pulley, or trigger, for giving motion to the cutters d d, which are connected with a horizontal axis by means of the rectangular arms c c; e e are adjusting screws, to regulate the depth of cut; and f f are binding screws, for securing the cutters when adjusted. g b show a band by which the motion of the steam engine, or other first mover, is transmitted to the revolving cutters. h h show the board to be acted upon, and i i are two rollers resting upon the board, and by means of the weight k, the lever l, and the bent frame m m, prevent the board from rising while under the operation of the cutters.



The boards are brought forward to the cutters by means of a chain passing over a drum situated where the frame is shown imperfect. From different links of the chain descend hooks, which hold the end of the board and force it forward as the drum revolves, and when the last end of the board is brought under the drum it is to be pushed forwards by the introduction of another board, and a hook from the chain applied to the farther end of that, and so on in succession, during the operation of the machine.

The favorable opinion which we formerly gave of Mr. Muir's planing machine has been completely borne out by the success of the machine, and we have every reason for believing that the patent before us will prove an important addition to his former invention.—[Reg. of Arts.]

**IRON BOATS—Expedition to the Niger.**—Extract of a letter from Mr. Richard Lander, dated Isle de Loz, Coast of Africa, Sept. 6, 1832, on board the Quorra Steamer:—"I write merely to inform you we arrived here on the 3d instant, all well, and leave for Cape Coast this evening. All the vessels have behaved very well. We have had several tornadoes: the lightning was felt more on board the Quorra than the iron steamer; it remained on our decks, but it merely struck the sides of the latter, and glided off into the water. This will give you an idea that an iron vessel is even safer than one built of wood. On board the Quorra we suffer much from the smell of bilge water, while the iron boat has not made one inch of water since she sailed from Liverpool, and she is never warmer than the water she floats in."

[From Babbage's Work on Economy of Machinery, &c.]

**MACHINE FOR MAKING PINS.**—Some further reflections are suggested by the preceding analysis, but it may be convenient previously to place before the reader a brief description of a machine for making pins, invented by an American. It is highly ingenious in point of contrivance, and, in respect to its economical principles, will furnish a strong and interesting contrast with the manufacture of pins by the human hand. In this machine, a coil of brass wire is placed on an axis; one end of this wire is drawn by a pair of rollers through a small hole in a plate of steel, and is held there by forceps. As soon as the machine is put in action—

1. The forceps draws the wire on to a distance equal in length to one pin: a cutting edge of steel then descends close to the hole through which the wire entered, and severs a piece equal in length to one pin.

2. The forceps holding the wire moves on until it brings the wire into the centre of the chuck of a small lathe, which opens to receive it. Whilst the forceps returns to fetch another piece of wire the lathe revolves rapidly, and grinds the projecting end of the wire upon a steel mill which advances towards it.

3. After this first, or coarse pointing, the lathe stops, and another forceps takes hold of the half pointed pin, (which is instantly relieved by the opening of the chuck,) and conveys it to a similar chuck of another lathe, which receives it, and finishes the pointing on a finer steel mill.

4. This mill again stops, and another forceps removes the pointed pin into a pair of strong steel clamps, having a small groove in them by which they hold the pin very firmly. A part of this groove, which terminates at that edge of the steel clamps which is intended to form the head of the pin, is made conical. A small round steel punch is now driven forcibly against the end of the wire thus clamped, and the head of the pin is partially formed by pressing the wire into the conical cavity.

5. Another pair of forceps now removes the pin to another pair of clamps, and the head of the pin is completed by a blow from a second punch, the end of which is slightly concave. Each pair of forceps returns as soon as it has delivered its



burthen; and thus there are always five pieces of wire at the same moment in different stages of advance towards a finished pin. The pins so formed are received into a tray, and whitened, and papered in the usual manner.

About sixty pins can thus be made by this machine in one minute; but each process occupies exactly the same time in performing.

**PUBLIC IMPROVEMENTS IN WASHINGTON.**—Report of the Commissioner of the Public Buildings, of the expenditure of the appropriations for Public Improvements in the City of Washington, in the year 1852.

WASHINGTON, December 13, 1852.

SIR:—In obedience to the act of March 3, 1829, "making appropriations for the public buildings, and other purposes," I have the honor to report, that the expenditures out of the appropriations of last session, committed to my charge, have been as follows:

Improving Pennsylvania avenue,	\$28,492 08
Conveying water to the Capitol,	24,222 71
Conveying water to the public offices,	2,597 93
Improving the Capitol square,	997 67
Improving the President's square,	3,000 00
Alterations and repairs in the Capitol,	1,442 04
Do. in the President's House,	209 06
Paving the walk from the western gate to Capitol,	4,572 34
Erecting a keeper's house, and improving the burial ground reserved for Members of Congress, &c.	1,500

The advanced state of the season when the appropriations were made, and the awful epidemic which visited our city shortly thereafter, paralyzing to a great extent, and for a considerable time, every effort to procure laborers, have prevented the completion of the principal works. The annexed report of Mr. Wever, who superintends the improvement of Pennsylvania avenue, will show the progress made in that work. The act of last session directs that the centre way be paved in a permanent manner, and the side-ways covered with the best gravel that could be obtained. It was, however, found impracticable to carry on both operations at the same time, without great inconvenience and increased expense. The gravelling of the side-ways was therefore suspended until the paving of the centre was finished; and this circumstance affords an opportunity of authorizing the entire width of the avenue to be done in the same permanent manner, if it should meet the approbation of Congress. Mr. Wever's report exhibits an estimate of the difference in expense which this would occasion.

A fountain of pure water, discharging sixty gallons per minute, has been secured, and the water conveyed in iron pipes to within a short distance of its ultimate termination at the Capitol. One of the capacious reservoirs is nearly finished, and the material for the other is being prepared.

The fountain on square two hundred and forty-nine has been conducted in iron pipes to the nearest offices; but it has yet to be extended to the President's House and more remote offices, and the reservoirs and hydrants are to construct.

Respectfully submitted,

J. ELGAR, Com. Pub. Buildings.

Hon. Speaker of the House of Representatives.

WASHINGTON, December 12, 1852.

SIR: That part of the Pennsylvania avenue between 3d and 14th streets, embracing a distance of 4,888 feet, or nearly one mile, has been completed, as far as the graduation and macadamized cover of the centre space are concerned. The macadamized cover is forty-five feet in width, and nine inches in depth, composed of three strata of metal; the two first of which are of stone reduced to particles not exceeding four ounces, and the last of particles not exceeding three ounces, in weight.

The advanced state of the season, and the expected appearance of the cholera, rendered it prudent to undertake, with a view to completion,

no more than could certainly be accomplished, under those circumstances, within the month of November. Much exertion was used to effect what has been done. The contractors labored under many and serious difficulties, but succeeded in effecting what was expected.

The existing law, making an appropriation for the improvement of that avenue, provides that the spaces between the centre macadamized cover and the side drains shall be graduated, and then covered with gravel of the best quality. It was impracticable to carry on this operation simultaneously with that on the centre, unless at what was deemed an unjustifiable increase of expense. Those spaces were indispensable as places of deposit for the material of which the macadamized cover was formed. If they had not been thus occupied, the material would necessarily have been handled at an increased expense; besides, the prosecution of that part of the work would have created an additional demand for labor, which could not have been obtained, unless at an advance of wages. During the winter season this work cannot progress with propriety, and as a suspension has necessarily taken place, and must continue during the winter, I would respectfully suggest the propriety of an application to Congress for such modification of the law as will admit of the extension of the macadamized cover over the whole extent of the travelled space of the avenue. If the cover on those spaces be made of gravel of the best quality, it will soon wear rapidly, and occasion much dust in dry weather, and mud in wet weather. The mud will be carried on the macadamized part, and be productive of injury to it.

The accompanying statement, marked A, shows that, for the completion of that part of the avenue as contemplated to be improved by the existing act of Congress, and, on the plan directed by that act, that is, with a gravel cover on the side spaces, it is estimated that an additional sum of \$29,082 75 will be requisite; and that for the completion of the same extent, on the modified plan, now suggested, the present appropriation will fall short of the estimated cost the sum of \$48,288 75.

Several depressions were originally formed transversely of the surface of the avenue for the purpose of conveying the water across it. Those depressions were unsightly in appearance, were at all times annoying interruptions to the free passage of carriages, and in winter were dangerous. They have been considered totally inadmissible in the principal avenue of the metropolis of the republic, and have been abolished by the substitution of subterranean arched drains. The construction of those drains considerably enhanced the cost of the road bed formation.

The graduation of the avenue was a task of some difficulty. The buildings, at opposite points, were found seldom to occupy the same level, and respect was due to them in any system of graduation which might be adopted. This was an embarrassing circumstance. After much examination and deliberation, an intermediate level was generally adopted as the basis of the cross section of the road. It was believed that this course was calculated to give more general satisfaction to the property holders, as well as be most likely to give to the avenue the best appearance of which it was susceptible, in consequence of the existence of this unfortunate circumstance. This plan was approved by the Mayor of the city; and so far, I have heard of no exception to it. A confident belief is indulged, that, when it is fully developed, by the entire completion of the work, it will prove satisfactory to the citizens of Washington and the public generally. By this plan the centre will be perfectly formed, whilst any inequalities of curvature or convexity, which must be submitted to because of the circumstance before adverted to, will be confined to the side spaces exclusively. A greater rise or convexity than is ordinarily admitted in macadamized roads has been given to this road, in order that the rain water may flow more freely, and thus relieve the avenue from a portion of the dust which would otherwise accumulate and become annoying. The altitude of the centre cover is, to the base, nearly as one to

forty; that of the sides will vary, some parts will be a little more, and some a little less, curved.

The two centre rows of trees have been removed, so that the entire space between the side drains now constitutes a single and very superior way. It is believed that the foot pavements ought to be increased in width, so as to include within their curbs the trees which are now exterior to them. The trees, as now situated, are liable to be injured by passing carriages, and are also an obstruction to the approach of carriages, &c. to the foot pavements. With a view also of perfecting the avenue, and securing it from a deposit of mud carried from the cross streets, it is proposed to macadamize a portion of those streets. To effect these desirable objects, as well as to promote the utility and beauty of the avenue, and at the same time fully to develop the adopted plan of improvement, I have prepared an estimate of the expense, amounting to the sum of \$69,634 72, and which is herewith communicated, marked B. The estimate may probably be considered large, and, if the improvement be authorized, may be found more than sufficient. It is, however, my rule to make such estimates as may be fully relied upon to effect the object intended.

I feel so confident that the plan now proposed is the only correct one, and that, if executed, it will be so regarded by every one who may see the work, that I will be excused by urging it upon your consideration, and earnestly suggesting the propriety of an application, on your part, for a correspondent modification of the law, and for the funds necessary to carry it into effect.

Before I close this communication, permit me to remark, that not only the more speedy, but also the more economical, completion of the work will be materially promoted by an early action of Congress on the subject.

Respectfully submitted,

CASPAR W. WEVER.

Joseph Elgar, Esq. Com. Pub. Buildings,  
Washington City.

A.

Statement of the estimated cost of the improvement of the Pennsylvania avenue, as contemplated by the act of Congress.

The Macadamized cover will be 11,300 feet in length, by 45 feet in width, and embraces 56,500 superficial yards; an half will cost about 70 cents a yard, and the other half about 75 cents.

28,250 yards, at 70 cents,	19,775 00
28,250 yards at 75 cents,	21,187 50
	40,962 50
58,200 yards of gravelling at 45 cts.,	26,190
Graduation and subterranean drains,	12,500
Paving 10,500 square yards of side drains, at 38 cents,	3,150
Contingencies, 10 per cent.	8,280 25

	91,082 75
Deduct the present appropriation,	62,000

\$29,082 75

Shewing that the sum of \$29,082 75 will be necessary, in addition to the present appropriation, to complete the work as directed by the existing act of Congress.

But if it be determined to cover the entire space with broken stone instead of gravel, then an addition of thirty cents a yard on 58,200 yards, or \$17,460, must be added, as well as 10 per cent. on this last sum for contingencies, making together \$19,206; which sum, with the above \$29,082 75, produces the aggregate sum of \$48,288 75.

B.

Statement of the estimated expense of the improvement of the Pennsylvania avenue, by extending the foot pavements not less than 5½ feet on each side, and forming the side drains about 4½ feet wide; macadamizing the centre space, which would then be not more than 109 feet between the curbs; setting a line of curbs, of granite, 8 inches thick, on



each side of that part of the avenue between the Capitol square and the President's square, with suitable returns at the cross streets; and macadamizing the cross streets for about 50 feet on each side of the macadamized cover of the avenue.

The macadamized cover as now authorized, (see statement A.)	40,962 50
49,674 yards additional macadamized cover, at 75 cents,	37,255 50
Graduation and subterranean drains,	12,500
12,930 feet of curb stone, set at \$1 40 a foot,	19,502
10,500 yards side drains, at 30 cents a yard,	3,150
5,556 yards of foot pavement to take up and re-lay, at 25 cents,	1,389
Macadamized cover on cross streets, say 50 feet on each side of the cover of the avenue, would require about 9,500 yards at 75 cents,	7,125
Contingencies, 8 per cent.	9,750 72
	131,634 72
Deduct the present appropriation,	62,000
	\$69,634 72

There will then be required the sum of \$69,634 72 to complete the work on the plan here suggested, which is deemed the proper plan, and is very earnestly recommended.

#### Application of Projectiles to Rescuing from Fire. [From the London Mechanics Magazine.

We extract from the "Supplement" alluded to in the article on "Mr. Murray's Plan of Instantaneous Communication with Stranded Vessels," (see page 51,) the following proposition for the application of Mr. Murray's pistol and arrow to the purposes of a fire-escape:

"I have already particularly referred to the application of the arrow and line to the instantaneous formation of fire, and it has been mentioned that the cord projected over a building was found quite sufficient to draw a rope over the roof. The suggestion was to make it thus effective for an extended rope ladder, which might be instantaneously formed on both sides of the building. The parallel ropes employed in the formation of the rope ladder must needs be kept separate by bars of wood alternating with rope, in order to prevent approach; and a single rope would suffice, there being steps attached to the side like the stirrup, the footstep having its base formed of wood, which would thus preserve an open space; the rope might be either projected at once over the roof and fastened on the opposite side, or the arrow be fired into one of the highest windows, or wherever required; to the top of the rope attached to the line might be fastened a lantern, to direct proceedings; a hammer and staple with a tally, instructing the inmates to drive the staple firmly into the floor, for fastening the rope of escape to it. For the purpose of facilitating the descent of the timid or helpless, the rope referred to might be supplied with two or more blocks, with pulleys on each side, through which patent sash cord might pass for the purpose of raising or lowering a square basket, for the reception of invalids or females and children; and by the steps provided, some intrepid and enterprising individual might ascend for facilitating the rescue of the infirm and timid.

"There are cases wherein no fire-escape hitherto proposed would have proved effective in saving the helpless inmates. I may mention, as an instance of this description, the conflagration of Mr. Haigh's cotton-mills, at Colne-bridge, near Huddersfield, some years ago, and in which seventeen individuals perished, as recorded in the pyramidal tomb reared over their ashes in the neighboring church-yard."

A mode of rescue similar to this of Mr. Murray's—only that a cross-bow is used instead of the pistol and arrow—has been already successfully reduced to practice by the admirable fire-

#### METEOROLOGICAL RECORD FOR THE WEEK ENDING MONDAY, FEBRUARY 25, 1833. KEPT IN THE CITY OF NEW-YORK. [Communicated for the American Railroad Journal.]

Date	Hours	Barometer.	Thermometer.	Winds.	Strength of wind.	Clouds from what direction	Weather and Remarks.
Tuesday, Feb. 19..	6 a. m.	29.68	42	SSW	moderate	WSW	cloudy
	10	.73	44	..	..	..	..—rain
	2 p. m.	.72	44	..	..	..	rainy—cloudy
	6	.70	43	..	..	..	cloudy
Wednesday, " 20..	10	.75	41	..	..	..	..
	6 a. m.	.84	40	SSW—SW	..	..	..
	10	.89	42	WSW	..	..	..
	2 p. m.	.89	48	..	..	..	..
Thursday, " 21..	6	.84	46	..	..	..	..
	10	.95	35	..	..	..	..
	6 a. m.	30.08	25	NNW	..	..	cloudy—fair
	10	.15	30	NW—WSW	..	{ WSW WNW }	fair—scud cloud from WNW
Friday, " 22..	2 p. m.	.11	34	WSW—WNW	fresh	W by S—WNW	..
	6	.14	32	WNW	moderate	..	..
	10	.19	30	..	..	..	clear
	6 a. m.	.20	30	SW by W	..	WSW	fair
Saturday, " 23..	10	.20	38	..	fresh	..	..—thin cirrus cloud
	2 p. m.	.09	45	..	strong	..	..—beautifully variegated cirri.
	6	.00	42	..	moderate	..	..
	10	29.98	38	..	light	..	clear
Sunday, " 24..	6 a. m.	.95	35	SW	moderate	..	..
	10	30.05	44	SW to NW	..	WSW	fair
	2 p. m.	.05	46	NW to NE	..	..	..
	6	.10	42	NE	..	..	..
Monday, " 25..	10	.15	34	NNE	..	..	..—bank of clouds at NNE
	6 a. m.	29.94	35	N by E	..	{ WSW E WSW }	cloudy—wind scuds from E
	10	.83	38	..	..	{ SE SE }	..—clouds moving swiftly
	2 p. m.	.57	46	..	..	{ SW —SW }	fair—bar. low't at 5, bank of clouds rising from WSW
Tuesday, " 26..	6	.47	40	NNE—NW	gale	{ ESE }	at 7.15 sudden gale from NW
	10	.66	32	NW	..	..	snow [with rain and snow]
	6 a. m.	30.00	18	..	fresh strong	{ WSW NW }	fair—wind scuds from NW
	10	.02	24	..	strong	{ .. .. }	..
Wednesday, " 27..	2 p. m.	.07	27	..	..	NW	..
	6	.18	24	NNW	moderate	..	..
	10	.30	22	NW	..	..	clear

Average temperature of the week, 36.16

establishment of Edinburgh. As the Edinburgh arrangements for the purpose are more complete than those of Mr. M., and are most of them equally adapted to the present invention, we shall here add the account given of them by Mr. Braidwood, in his excellent work on fire-engines, (Edin. 1830.)

"The apparatus necessary for this fire-escape is a chain ladder, 80 feet long, a single chain or rope of the same length as the ladder, a canvass bag, a strong cross steel bow, and a fine cord of the very best workmanship and materials 130 feet long, with a lead-bullet of 3 ounce weight attached to one end, and carefully wound upon a wooden cone, 7 inches high, and 7 inches broad at the base, turned with a spiral groove, to prevent the cord slipping when wound upon it; also a small pulley with a claw attached to it, and a cord reeved through it of sufficient strength to bear the weight of the ladder. In order to prevent the sides of the ladder from collapsing, the steps are made of copper or iron tube, fastened by a piece of cord passed through the iron tube and into the links of the chain until the tube is filled. The steps thus fastened are tied to the chain with No. 14 copper wire, so that in the event of the cord being destroyed, the steps will be retained in their places by the wire. The ladder is provided with two large hooks at one end, for the purpose of fixing it to a roof, window, sole, &c. The bag is of No. 3 canvass, 3 feet wide and 4 feet deep, with cords sewed round the bottom, and meeting at the top, where they are turned over an iron thimble at each side of the mouth of the bag. The steel cross-bow is of the ordinary description, of sufficient strength to throw the lead-bullet, with the cord attached, 120 feet high. When the house from which the persons in danger are to be extricated is so situated that the firemen can get to the roof by passing along the tops of the adjoining houses, they will carry up the chain-ladder with them, and drop it over the window where the inmates

show themselves, fastening the hooks at the same time securely in the roof. The firemen will descend by the ladder into the window, and putting the persons to be removed into the bag, lower them down into the street by the single chain. If the flames are issuing from the windows below, the bag when filled is easily drawn aside into the window of the adjoining house by means of a guy or guide-rope. If the house on fire stand by itself, or if access cannot be had to the roof by means of the adjoining houses, the lead-bullet with the cord attached is thrown over the house by means of the cross-bow; to this cord a stronger one is attached, and drawn over the house by means of the former; a single chain is then attached and drawn over in like manner; and to this last is attached the chain-ladder, which, on being raised to the roof, the firemen ascend and proceed as before directed."

#### [COMMUNICATED FOR THE N. Y. AMERICAN.]

At a regular meeting of the New York Lyceum of Natural History on Monday evening, Captain M. C. Perry, of the United States' Navy, a member of the Society, presented a meteorological journal kept under his direction on board of the United States' ships North Carolina, Concord and Cyane, during cruises of these vessels in different parts of the world, from March 1825, to December 1832. This interesting journal contains the mean barometrical altitude, the mean temperature of the air and water, from observations made every hour, the place of the ship, and general remarks of the wind and weather, and furnishes a mass of information on the subject of the climate of different parts of the world highly interesting to the scientific observer, and of particular importance to the physician or invalid who should wish to recommend or choose any of the places mentioned in it as a residence. To those acquainted with Captain Perry, the work has a still greater value by the confidence they can place, from the pleasure he takes in investigating different branches of science, in the accuracy of the work. The journal can be examined by applying to any officer of the Society.



## MODERN TRAVELLING.

[From the London Quarterly Review.]

May we be permitted, since we have mentioned the Arabian Nights, to make a little demand on our readers' fancy, and suppose it possible, that a worthy old gentleman of this said year—1742—had fallen comfortably asleep *à la Dodswell*, and never awoke till Monday morning in Piccadilly? 'What coach, your honor?' says a ruffian-looking fellow, much like what he might have been had he lived a hundred years back. 'I wish to go home to Exeter,' replied the old gentleman, mildly. 'Just in time, your honor—here she comes—them there gray horses—where's your luggage?' 'Don't be in a hurry,' observes the stranger; 'that's a gentleman's carriage.' 'It ain't! I tell you,' says the cad, 'it's the Comet, and you must be as quick as lightning.' *Nolens volens*, the remonstrating old gentleman is shoved into the Comet, by a cad at each elbow, having been three times assured his luggage is in the hind seat, and twice three times denied having ocular demonstration of the fact.

However, he is now seated—and 'What gentleman is going to drive us?' is his first question to his fellow-passengers. 'He is no gentleman, sir,' says a person who sits opposite to him, and who happens to be a proprietor of the coach. 'He has been on the Comet ever since she started, and is a very steady young man.' 'Pardon my ignorance,' replies the regenerated; 'from the cleanliness of his person, the neatness of his apparel, and the language he made use of, I mistook him for some enthusiastic Bachelor of Arts, wishing to become a charioteer after the manner of the illustrious ancients.' 'You must have been long in foreign parts, sir,' observes the proprietor. In five minutes or less, after this parley commenced, the wheels went round, and in another five, the coach arrived at Hyde Park gate; but long before it got there, the worthy gentleman of 1742 (set down by his fellow-travellers for either cracked or an emigrant from the Backwoods of America) exclaimed, 'What! off the stones already?' 'You have never been on the stones,' observes his neighbor on his right; 'no stones in London, now, sir.' 'But we are going at a great rate,' exclaims again the stranger. 'Oh no, sir,' says the proprietor, 'we never go fast over this stage. We have time allowed in consequence of being subject to interruptions, and we make it up over the lower ground.' Five-and-thirty minutes, however, bring them to the noted town of Brentford. 'Hah!' says the old man, becoming young again—'what, no improvement in this place? Is old Brentford here? a national disgrace!'

In five minutes under the hour the Comet arrives at Hounslow, to the great delight of our friend, who by this time waxed hungry, not having broken his fast before starting. 'Just 55 minutes and 37 seconds,' says he, 'from the time we left London!—wonderful travelling, gentlemen, to be sure, but much too fast to be safe. However, thank heaven, we are arrived at a good looking house; and now, waiter! I hope you have got breakfast.' Before the last syllable, however, of the word could be pronounced, the worthy old gentleman's head struck the back of the coach by a jerk, which he could not account for (the fact was, three of the four fresh horses were bolsters), and the waiter, the inn, and indeed Hounslow itself, disappeared in the twinkling of an eye. Never did such a succession of doors, windows, and window shutters pass so quickly in his review before—and he hoped they might never do so again. Recovering, however, a little from his surprise—'My dear sir,' said he, 'you told me we were to change horses at Hounslow? Surely, they are not so inhuman as to drive these poor animals another stage at this unmerciful rate?' 'Change horses, sir?' says the proprietor; 'why we changed them whilst you were putting on your spectacles, and looking at your watch. Only one minute allowed for it at Hounslow, and it is often done in fifty seconds by those nimble-fingered horse-keepers.' 'You astonish me—but really I do not like to go so fast.' 'Oh, sir, we always spring them over these six miles. It is what we call the *hospital ground*.' This alarming phrase is presently interpreted: it intimates that horses whose backs are getting down instead of up in their work—some that won't hold an ounce down hill, or draw an ounce up—others that kick over the pole one day, and over the bars the next, in short all the reprobates, styled in the road slang *bokickers*, are sent to work these six miles—because here they have nothing to do but to gallop—not a pebble as big as a nutmeg on the road, and so even, that it would not disturb the equilibrium of a spirit-level.

The coach, however, goes faster and faster over

the *hospital ground*, as the *bokickers* feel their legs, and the collars get warm to their shoulders; and having ten outside, the luggage of the said ten, and a few extra packages besides on the roof, she rolls rather more than is pleasant, although the centre of gravity is pretty well kept down by four not slender insides, two well laden boots, and three huge trunks in the *slide*. The gentleman of the last century, however, becomes alarmed; is sure the horses are running away with the coach—declares he perceives by the shadow, that there is nobody on the box, and can see the reins dangling about the horses' heels. He attempts to look out of the window, but his fellow traveller dissuades him from doing so:—'You may get a shot in your eye from one of the wheels. Keep your head in the coach, it's all right, depend on't. We always spring 'em over this stage.' Persuasion is useless; for the horses increase their speed, and the worthy old gentleman looks out. But what does he see? Death and destruction before his eyes? No! to his surprise he finds the coachman firm at his post, and in the act of taking a pinch of snuff from the gentleman who sits beside him on the bench, his horses going at the rate of three miles in the minute at the time. 'But suppose anything should break, or a linch pin should give way and let a wheel loose?' is the next appeal to the communicative but not very counselling proprietor. 'Nothing can break, sir,' is the reply; 'all of the very best stuff; axletrees of the best H. Q. iron, faggoted edgeways, well bedded in the timbers—and as for linch pins, we have not one about the coach. We use the best patent boxes that are manufactured. In short, sir, you are as safe in it as if you were in your bed.' 'Bless me, exclaims the old man, 'what improvements! and the roads!' 'They are at perfection,' says the proprietor; 'no horse walks a yard in this coach between London and Exeter—all trotting ground now.' 'A little galloping ground, I fear, whispers the senior to himself: 'But who has effected all this improvement in your paving?' 'An American of the name of McAdam,' was the reply—but coachmen call him the Colossus of Roads. Great things have likewise been done in cutting through hills and altering the course of roads: and it is no uncommon thing now-a-days to see four horses trotting away merrily down a hill on that very ground where they were formerly seen walking up hill.

'And pray, my good sir, what sort of horses may you have over the next stage?' 'Oh, sir, no more bokickers. It is hilly and severe ground, and requires cattle strong and staid. You'll see four as fine horses put to the coach at Staines as you ever saw in a nobleman's carriage in your life.' 'Then we shall have no more galloping—no more springing them, as you term it?' 'Not quite so fast over the next ground,' replied the proprietor; 'but he will make good play over some part of it; for example, when he gets three parts down a hill he lets them loose, and cheats them out of half the one they have to ascend from the bottom of it. In short, they are half way up it before a horse touches his collar; and we must take every advantage with such a fast coach as this, and one that loads so well, or we should never keep our time. We are now to a minute; in fact, the country people no longer look at the sun when they want to set their clocks; they look only to the Comet. But depend upon it, you are quite safe; we have nothing but first rate artists on this coach.' 'Artist! artist!' grumbles the old gentleman, 'we had no such term as that.'

'I should like to see this artist change horses at the next stage,' resumes our ancient, 'for at the last it had the appearance of Magic—'Presto, Jack, and begone!' 'By all means; you will be much gratified. It is done with a quickness and ease almost incredible—to any one who has only read or heard of it; but use becomes second nature with us. Even in my younger days it was always half an hour's work—sometimes more.'

The coach arrived at Staines, and the ancient gentleman puts his intentions into effect, though he was near being again too late; for by the time he could extract his hat from the netting that suspended it over his head, the leaders had been taken from their bars, and were walking up the yard towards the stables. On perceiving a fine, thoroughbred horse led towards the coach with a twitch fastened tightly to his nose, he exclaims, 'Hailen, Mr. Horse-keeper? You are going to put an unruly horse in the coach.' 'What? this here ass?' growls the man; 'the queerest animal alive, sir!' as he shoves him to the near side of the pole. At this moment however, the coachman is heard to say, in somewhat of an under tone, 'Mind what you are about, Bob; don't let him touch the roller-

bolt. In thirty seconds more, they are off—the staid team, so styled by the proprietor, in the coach. 'Let 'em go,' says the artist, so soon is he firmly seated upon his box. With this, the near leader rears right on end, and if the rein had not been yielded to him at the instant, he would have fallen backward on the head of the pole. The moment the twitch was taken from the nose of the thoroughbred near wheeler, he drew himself back to the extent of his pole-chain—his fore legs stretched out before him—and then, like a lion loosened from his toil, made a snatch at the coach that would have broken two pair of traces of 1742. A steady and good willed horse, however, his partner, started the coach himself, with a gentle touch of the thong, and away they went off together. But the thorough bred one was very far from being comfortable; it was in vain that the coachman tried to soothe him with his voice, or stroking him with the drop of his tool, i. e. whip. He drew three parts of the coach, and cantered for the first mile, and when he did settle down to his trot, his snorting could be heard by the passengers, being as much as to say, 'I was not born to be a slave.' In fact, as the proprietor now observed, 'he had been a fair plate horse in his time, but his temper was always queer.'

After the first shock was over, the Conservative of the 18th century felt comfortable. The pace was considerably slower than it had been over the last stage, but he was unconscious of the reason for its being diminished. It was to accommodate the queer temper of the race-horse, who, if he had not been humored at starting, would never have settled down to his trot, but have ruffled all the rest of the team. He was also surprised, if not pleased, at the quick rate at which they were ascending hills, which, in his time, he should have been asked by the coachman to have walked up—but his pleasure was short-lived; the third hill they descended produced a return of his agony. This was what is termed on the road a *long fall of ground*, and the coach rather pressed on the horses. The temper of the race-horse became exhausted; breaking into a canter, he was of little use as a wheeler, and there was then nothing for it but a gallop. The leaders only wanted the signal; and the point of the thong being thrown lightly over their backs, they were off like an arrow out of a bow: but the rocking of the coach was awful, and more particularly so to the passengers on the roof. Nevertheless, she was not in danger; the master-hand of the artist kept her in a direct line; and meeting the opposing ground, she *steadied*, and all was right. The newly-awakened gentleman, however, begins to grumble again. 'Pray, my good Sir,' says he anxiously, 'do use your authority over your coachman, and insist upon his putting the drag chain on the wheel, when descending the next hill.' 'I have no such authority,' replies the proprietor. 'It is true, we are now drawn by my horses, but I cannot interfere with the driving of them.' 'But is he not your servant?' 'He is, Sir; but I contract to work the coach so many miles in so many hours, and he engages to drive it, and both are subject to a fine if the time be not kept on the road. On so fast a coach as this, every advantage must be taken, and if we were to drag down such hills as these, we should never reach Exeter to-day.'

Our friend, however, will have no more of it.—He quits the coach at Bagshot, congratulating himself on the safety of his limbs.

The worthy old gentleman is now shown into a room, and, after warming his hands at the fire, rings the bell for the waiter. A well-dressed person appears, whom he of course takes for the landlord. 'Pray sir,' says he, 'have you any *slow* coach down this road to-day?' 'Why, yes, sir,' replies John; 'we shall have the Regulator down in an hour.' 'Just right,' said our friend, it will enable me to break my fast, which I have not done to-day.' 'Oh, sir,' observes John, 'these here fast drags be the ruin of us. 'Tis all hurry scurry, and no gentleman has time to have nothing on the road. What will you take, sir? Mutton-chops, veal-cutlets, beef-steaks?'

At the appointed time, the Regulator appears at the door. It is a strong, well-built *drag*, painted what is called chocolate color; bedaubed all over with gilt letters—a bull's head on the doors, a Saracen's head on the hind boot—and drawn by four strapping horses; but it wants the neatness of the other. The passengers may be, by a shade or two, of a lower order than those who had gone forward with the Comet; nor perhaps is the coachman quite so refined as the one we have just taken leave of. He has not the neat white hat, the clean doekin gloves, the well-cut trowsers, and dapper frock, but still his appearance is respectable, and perhaps in



the eyes of many, more in character with his calling. Neither has he the agility of the artist on the Comet, for he is nearly double his size; but he is a strong, powerful man, and might be called a pattern card of the heavy coachman of the present day—in other words, a man who drives a coach which carries sixteen passengers instead of fourteen, and is rated at eight miles in the hour instead of ten. What room in the Regulator? says our friend to the waiter, as he comes to announce its arrival. Full inside, sir, and in front, but you'll have the backgammon board all to yourself, and your luggage is in the hind boot. Backgammon board! Pray what's that? Do you not mean the basket? Oh no, sir, says John, smiling—no such a thing on the road now. It is the hind-dickey, as some call it; where you'll be as comfortable as possible, and can sit with your back or your face to the coach, or both, if you like. Ah, ah, continues the old gentleman; something new again, I presume. However, the mystery is cleared up; the ladder is reared to the hind wheel, and the gentleman safely seated on the backgammon board.

Before ascending to his place, our friend has cast his eye on the team that is about to convey him to Hertford Bridge, the next stage on the great western road, and he perceives it to be of a different stamp from that which he had seen taken from the coach at Bagehot. It consisted of four moderate sized horses, full of power, and still fuller of condition, but with a fair sprinkling of blood—in short the eye of a judge would have discovered something about them not very unlike galloping. All right! cried the guard, taking his key bugle in his hand; and they proceeded up the village, at a steady pace, to the tune of 'Scots wha hae wi' Wallace bled,' and continued at that pace for the first five miles. I am landed, thinks our friend to himself. Unluckily, however, for the humane and cautious old gentleman, even the Regulator was now to show tricks. Although what now is called a slow coach, she is timed at eight miles in the hour, through a great extent of country, and must of course make play where she can, being strongly opposed by hills lower down the country, trifling as these hills are, no doubt, to what they once were. The Regulator, moreover, loads well, not only with passengers, but with luggage; and the last five miles of this stage, called the Hertford bridge flat, have the reputation of being the best five miles for a coach to be found at this time in England.

The ground is firm, but elastic; the surface undulating, and therefore favorable to draught; always dry, not a shrub being near it; nor is there a stone upon it much larger than a marble. These advantages, then, are not lost to the Regulator, or made use of without sore discomposure to the solitary tenant of her backgammon board.

Any one that has looked into books will very readily account for the lateral motion, or rocking, as it is termed, of a coach, being greatest at the greatest distance from the horses—(as the tale of a paper kite is in motion whilst the body remains at rest;) and more especially when laden as this coach was—the greater part of the weight being forward. The Regulator takes but twenty-three minutes for these celebrated five miles, which cannot be done without springing the cattle now and then; and it was in one of the very best of their gallops of that day, that they were met by the coachman of the Comet, who was returning with his up coach. When coming out of rival yards, coachmen never fail to cast an eye to the loading of their opponents on the road, and now that of the natty Artist of the Comet experienced a high treat. He had a full view of his quondam passenger, and thus described his situation. He was seated with his back to the horses—his arms extended to each extremity of the guard-irons—his teeth set grim as death—his eyes cast down towards the ground, thinking the less he saw of his danger the better. There was what is called a top-heavy load—perhaps a ton of luggage on the roof, and, it may be, not quite in obedience to the Act of Parliament standard. There were also two horses at wheel whose strides were of rather unequal length, and this operated powerfully on the coach. In short, the lurches of the Regulator were awful at the moment of the Comet passing her. A tyro in mechanics would have exclaimed, 'the centre of gravity must be lost, the centrifugal force will have the better of it, over she must go!'

The centre of gravity having been preserved, the coach arrives safe at Hertford bridge—but the old gentleman has again had enough of it. I will walk into Devonshire, said he, as he descended from his perilous exaltation. What did that rascally waiter mean by telling me it was a slow coach? and, more-

over, look at the luggage on the roof! Only regulation height, Sir, says the coachman; we aren't allowed to have it an inch higher;—sorry we can't please you, Sir, but we will try and make room for you in front. Fronti nulla fides, mutters the worthy to himself, as he walks tremblingly into the house—adding, I shall not give this fellow a shilling, he is dangerous.

The Regulator being off, the waiter is again applied to. What do you charge per mile posting? One and sixpence, Sir. Bless me, just double! Let me see—two hundred miles at two shillings per mile, postboys, turnpikes, &c., £20. This will never do. Have you no coach that does not carry luggage on the top? Oh yes, Sir, replies the waiter, we shall have one to-night, that is not allowed to carry a band-box on the roof. That's the coach for me; pray what do you call it? The Quicksilver mail, Sir; one of the best coaches out of London—Jack White and Tom Brown, pick'd coachmen, over this ground—Jack White down to-night. Guarded and lighted? Both, Sir; blunderbuss and pistols in the sword case; a lamp each side the coach, and one under the footboard—see to pick up a pin the darkest night of the year. Very fast? Oh no, Sir, just keeps time and that's all. That's the coach for me, then, repeats our hero; and I am sure I shall feel at my ease in it. I suppose it is what used to be called the Old Mercury.

Unfortunately, the Deavonport (commonly called the Quicksilver) mail is half a mile in the hour faster than most in England, and is, indeed, one of the miracles of the road. Let us, then, picture to ourselves our anti-reformer snugly seated in this mail, on a pitch-dark night in November. It is true she has no luggage on the roof, nor much to incommode her elsewhere, but she is a mile in the hour faster than the Comet, at least three miles quicker than the Regulator; and she performs more than half her journey by lamplight. It is needless to say, then, our senior soon finds out his mistake, but there is no remedy at hand, for it is the dead of the night, and all the inns are shut up. He must proceed, or be left behind in a stable. The climax of his misfortunes then approaches. Nature being exhausted, sleep comes to his aid, and he awakes on a stage which is called the fastest on the journey,—it is four miles of ground, and twelve minutes is the time! The old gentleman starts from his seat, having dreamed the horses were running away with the coach, and so, no doubt, they might be. He is, however, determined to convince himself of the fact, though the passengers assure him, 'all's right.' Don't put your head out of the window, says one of them, 'you will lose your hat to a certainty'; but advice is seldom listened to by a terrified man, and next moment a stentorian voice is heard, crying, 'Stop, coachman, stop—I have lost my hat and wig! The coachman hears him not—and in another second the broad wheels of a down-wagon have for ever demolished the lost head-gear. But here we must leave our adventurous Gilpin of 1742. We have taken a great liberty with him, it is true, but we are not without precedent. One of the best chapters in Livy contains the history of 'an event which never took place.' In the full charm of his imagination, the historian brings Alexander into Italy, where he never was in his life, and displays him in his brightest colours. We father our sins, then, upon the Patavinian.

## HOME AFFAIRS.

### CONGRESS.

Wednesday, 20th.—IN SENATE.

Mr. Naudain presented several resolutions of the General Assembly of the State of Delaware, praying a re-organization of the Militia of the United States.

Also, various resolutions of the same Legislature, relative to the tariff; both which series of resolutions were laid on the table.

On motion of Mr. Smith, the bill amendatory to the revenue act of 1832, and re-imposing a duty on sheet copper, for ships bottoms, was taken up and considered as in Committee of the Whole.

The bill was then ordered to be engrossed and read a third time.

The bill form the House, for the gradual improvement of the navy of the United States, was read twice, and referred to the Committee on Naval Affairs.

The Senate having proceeded to the election of a Printer to that body for the next Congress, the following balloting took place, viz:

	1st	2d	3d	4th	5th	6th	7th	8th	9th
Duff Green,	16	19	19	21	21	20	20	21	23
F. P. Blair,	17	17	17	17	15	13	11	11	10
Giles & Seaton,	8	7	5	5	6	10	11	11	9
Scatterling,	2	1	2	0	1	0	2	0	2

So, on the 9th balloting, Duff Green was declared to be duly chosen.

### Special Orders.

Mr. Poindexter concluded his remarks at fifteen minutes before three, when

Mr. Webster said a few words in reply. He was replied to by Mr. Poindexter; after which, the following bills were read severally and referred:

The bill making appropriations for the Indian Department for the year 1833;

The bill to create sundry new Land Offices, and to alter the boundaries of other Land Offices of the United States;

The bill making appropriations for the support of the army for the year 1833.

Mr. Foot presented the petition of Isaiah Brown, praying for a patent, which was referred to the Committee on Public Lands.

On motion of Mr. Grundy,

The Senate then took a recess until 5 o'clock.

### HOUSE OF REPRESENTATIVES.

Mr. Horn offered the following resolution:—

Resolved, That the Committee of Ways and Means be instructed to inquire into the expediency of repealing so much of the act of Congress, passed the 14th of July, 1832, entitled "an act to alter and amend the several acts imposing duties on imports," as provides that certain articles therein mentioned shall not be imported at a less rate of duty than would have been chargeable upon the raw material constituting the chief value, if imported in an unmanufactured state.

Mr. Horn explained the object of his resolution.

After some remarks from Mr. Dearborn, Mr. Cambreleng, and Mr. Huntington, the latter moved to lay the resolution on the table.

Mr. Speight moved the previous question, which, after an ineffectual motion by Mr. Denny for the Order of the Day, was seconded, and the main question was ordered and put, when the House adopted the resolution.

The House took up the special order of the day, which was

### The Tariff Bill.

The question was on the motion submitted by Mr. Taylor to reconsider the vote concurring in the amendment of the Committee of the Whole to lay a duty of two cents per pound on raw cotton imported.

Mr. Vinton asked for the yeas and nays, which were ordered and taken, when the motion was negatived by a vote of yeas 73, nays 105.

So the House refused to lay the motion on the table.

The question was then on the reconsideration of the vote.

Mr. Blair, of South Carolina, asked for the yeas and nays.

The question being taken on the motion for reconsideration, when it was decided in the affirmative, on a division, by yeas and nays, by a vote of yeas 91, nays 77. So the motion was agreed to.

The question recurred on the amendment of the Committee.

### [From the Washington Globe.]

ANALYSIS OF PROCEEDINGS.—During the evening session in the Senate, on Wednesday, Mr. Grundy addressed the Senate about three hours in support of the provisions and general principles of the bill further to provide for the collection of duties on imports. Mr. Ewing then followed in support of the bill in a speech of about an hour and a half. When Mr. E. had concluded, Mr. Tyler moved the Senate adjourn, which was negatived—yeas 5, nays 27. The question was then taken on the final passage of the bill, which was carried by the following vote—yeas 32, nays 1. The Senate then adjourned.

### Thursday, Feb. 20.—IN SENATE.

The vote by which the Senate heretofore agreed to take a recess daily from three to five o'clock, was on motion of Mr. Kane, rescinded. On motion of Mr. Clay, the bill modifying the several Tariff laws, was taken up as in Committee of the Whole. The several amendments reported by the Select Committee, to which the bill had been referred, were adopted, after some discussion, in which several members participated. Mr. Clay moved to amend the bill, by fixing the period of its commencement a quarter of a year later than originally reported, which was agreed to.

Mr. Clay then moved to amend the bill, by adding at the end of the third section as amended, a provision that the permanent duty of 20 per cent. to be assessed after 1842, should be calculated upon the market value of the merchandise at the port where it may be entered and not upon its foreign value. Upon this amendment a prolonged debate took place, in which Messrs. Clay, Smith, Forsyth, Holmes, Calhoun, Clayton, Dallas, Kane, Silas, Poindexter and Tyler, took part; when Mr. Moore moved to amend the amendment by adding a proviso that



the valuation should be uniform at all the ports of the United States.

This proviso was discussed by Messrs. Black, Clay, Calhoun, Holmes, Moore, Forsyth, Smith and Miller; when, before the question was taken, Mr. Holmes moved an adjournment, which was carried, Ayes 22, Noes 19.

#### HOUSE OF REPRESENTATIVES.

A bill from the Senate authorizing the President to cause the line between the States of Illinois and Indiana, to be run and durably marked, was passed with an amendment.

The Special Order (the Tariff Bill) was called, when Mr. Dickson moved to postpone it until Saturday (this day being specially set apart for the business of the District), for the purpose of making some disposition of the Bill from the Senate, above referred to. The motion was advocated by Messrs. Dickson, Irvin, Ellsworth and Sutherland, and opposed by Messrs. Cambreleng, Clay, Thompson, of Georgia, Bouldin, Archer, Clayton and Isaacs, and rejected—yeas 86, nays 99.

The House then resumed the consideration of the Tariff Bill. The amendment of the Committee of the Whole, which proposed to strike from the Bill the clause fixing a duty of 15 cents until 1834, and afterwards a duty of 10 cents per gallon on olive oil, was agreed to. The amendment fixing a duty of 25 cents per gallon on linseed, hemp seed, and rape seed oil, was amended by inserting a duty of 20 cents per gallon on olive oil, and concurred in.

The amendment of the Committee striking out the section imposing a duty of one cent per pound on coffee, after September, 1833, was concurred in—yeas 117, nays 57. The amendment striking out the section imposing a duty on teas was concurred in—yeas 108, nays 63. The House then, at six o'clock P. M., adjourned.

#### February 22.—IN SENATE.

The various bills lying on the table, waiting for their third reading, were taken up, read a third time, and passed.

On motion of Mr. Forsyth, the Senate then proceeded to the consideration of Executive business.

When the doors were re-opened—

The Senate proceeded to the consideration of the bill to modify the acts imposing duties on imports.

After considerable debate, the question being upon Mr. Clay's motion to amend the bill (so as to require a home instead of a foreign valuation, after the year 1842,) So the amendment was agreed to.

#### HOUSE OF REPRESENTATIVES.

Mr. Hoffman rose and announced to the House the decease of James Lent, Jr. a Member of the House of Representatives from the State of New York. After some appropriate remarks, Mr. H. submitted the following resolutions, which were unanimously adopted:

1. Resolved, That the members of this House will testify their respect for the memory of James Lent, deceased, late a member of this House from the State of New York, by wearing crape on the left arm for the remainder of the present session of Congress.

2. Resolved, That this House will attend the funeral of the late James Lent, to-morrow at 11 o'clock, A. M. and that a Committee be appointed to take order for, and to superintend, the said funeral.

3. Resolved, That a message be sent to the Senate to notify that body of the death of James Lent, late a member of this House, and that his funeral will take place to-morrow at 11 o'clock.

The House then adjourned.

#### Saturday, February 23.—IN SENATE.

At 11 o'clock the Senate attended the funeral of the Honorable James Lent, late a member of the House of Representatives, from the State of New York.

At half past one, the Senate convened and proceeded to business.

The Chair communicated a letter from the Secretary of State, transmitting statements of the names of seamen and passengers arrived in the ports of the United States during the last year.

Mr. Dallas presented a remonstrance from sundry manufacturers of worsted yarn resident in Philadelphia against a reduction of duties on those articles.

#### New Tariff Project.

On motion of Mr. Clay, the Senate resumed the consideration of the "bill to modify the Act passed July 14, 1832, entitled an act to alter and amend the several acts imposing duties on imports,"—the question being on Mr. Smith's motion to strike out that part of the 2d section of the Bill which increases the duty on Kendal cottons and plains, &c. from five per cent to fifty.

The Bill was then reported to the Senate, and the

several amendments adopted in the Committee of the Whole were concurred in. Mr. Dallas moved to strike out the words in the third section requiring that such duties should be laid as are necessary to an economical administration of the Government.

Mr. Dallas and Mr. Webster contended that this clause had no legal effect whatever, but amounted to an admonition to our successors that duties hereafter should be laid with a view to revenue only and not protection.

The discussion was continued by Messrs. Clay, Forsyth, Webster, and Buckner, and at 8 o'clock the motion was still undecided.

P. S.—Half past 9. Mr. Clay's Tariff Bill has just been ordered to be engrossed and read a third time without a division.

Mr. Dallas's amendment failed by a large majority.

#### HOUSE OF REPRESENTATIVES.

At half-past eleven o'clock, the body of the Hon. James Lent, deceased, attended by the pall bearers, the committee of arrangements, &c., was placed in the Hall of Representatives.

The President of the United States, the heads of Departments, the Senators and the officers of the Senate, and a numerous concourse of citizens of both sexes, entered the Hall about the same time.

The funeral service was performed by the Rev. Mr. Hammett, Chaplain of the House; after which the procession moved to the congressional burying ground, situate on the eastern branch of the Potomac.

At 2 o'clock, P. M. the House was called to order; but a quorum not being present, The House adjourned.

#### Monday, Feb. 25th.—IN SENATE.

Mr. Smith, from the Committee on Finance, reported the Bill making appropriations for the support of the army for the year 1833, without amendment.

The Senate resumed the consideration of the "bill to modify the Act of the 14th of July, 1832, and all other Acts imposing duties on imports."

#### HOUSE OF REPRESENTATIVES.

##### Revenue enforcing Bill.

The special order (the tariff bill) being called, Mr. Bell said he hoped the House would refuse to take up the special order, until some disposition was made of the bill from the Senate further to provide for the collection of duties on imports.

The House then refused to take up the Special order; Yeas 80, Nays 106.

#### Mr. Clay New Tariff Project.

The House then resumed the consideration of Mr. Verplank's Tariff bill.

Mr. Letcher moved to re-commit the bill to the Committee of the Whole, with instructions to strike out all after the enacting clause, and insert the bill pending in the Senate (Mr. Clay's) on the same subject, and that the Committee report the bill this day.

The motion was assented to—Yeas 96, Nays 54.

#### Half past 8 Evening.—Mr. Clay's Bill.

In the Senate, Mr. Smith, in the evening session, finished his speech against the bill.

Mr. Bell, of N. H. gave his reasons for voting for the measure.

Mr. Dickerson moved to recommit the bill from the Committee from which it was reported, with instructions so to amend it as to regulate the reduction of duties on articles now subject to a specific duty in such a manner that the reduction should not be more unfavorable to those articles than to articles subject to an ad valorem duty.

Mr. Mangum spoke in favor of the bill.

Mr. Holmes made some remarks on the same side.

Mr. Dickerson spoke at considerable length against the bill.

Mr. Clay then rose and supposed a case of the passage of this identical bill to an engrossment in the other House, in which case, it would be admitted that it would be unnecessary for the Senate to debate the matter longer at this time. He also suggested that those gentlemen who were prevented by constitutional scruples from giving their votes for the bill would, probably, be reconciled to its support in case it should come to us from the House of Representatives.

[It was known to the Senate some minutes before Mr. Dickerson closed his remarks, that the bill had passed to a third reading in the House, and there was a general expression of gratification at the intelligence. The House took the matter up in this informal way or rather hasty way, in order to rid the bill of the objection which had been raised against it as a Revenue Bill which could not be originated in the Senate. It was learned therefore that those members of the House of Representatives who oppose the bill, would raise the question of privilege against it.]

The Senate, on motion of Mr. Clay, then adjourned.

#### Tuesday, February 25.—IN SENATE.

On motion of Mr. Hendricks, the Senate proceeded to consider the bill for the continuation of the Cumberland Road, in the States of Indiana and Illinois.

Mr. Hendricks moved to amend the bill by inserting an additional appropriation of \$125,000, for repairing the Cumberland Road east of the Ohio.

The amendment was agreed to.

Mr. Hendricks moved to amend the bill, by adding a section authorizing the Secretary of the Treasury, with the approbation of the President, to change a part of the location of the road.

The amendment was agreed to.

The bill having been reported, the amendments were concurred in. The bill was then ordered to be engrossed and read a third time.

The bill from the House to modify the act of the 14th of July, and other acts imposing duties on imports, was read a first time, and ordered to a second reading.

The bill of the Senate on the same subject was then laid on the table.

The Senate then adjourned.

#### HOUSE OF REPRESENTATIVES.

##### The Tariff Bill.

As amended by inserting the whole bill of Mr. Clay, in the shape in which it has been ordered to a third reading in the Senate, was read a third time, and the question being on its passage—

Mr. Huntington, after a few remarks on the great importance of this question, moved a call of the House.

The House was called accordingly.

It appeared that 201 members were present.

Mr. Burges moved to suspend further proceedings on the call, but the motion failed—Yeas 69, Noes 78.

The doors were then closed, and the excuses of absentees received. Proceedings were then suspended, and the doors of the hall again opened.

Mr. Burges remonstrated very warmly against the passage of the bill; and in the course of his remarks adverted with some severity to the agency of Mr. Clay, in originating the measure.

Mr. Jenifer replied with warmth to this part of the speech, and vindicated the purity of Mr. Clay's motives and purposes.

Mr. Foster said his constitutional objections to the bill had been removed by a closer examination of its provisions. Still he did not like the bill, but was willing to take it as an experiment.

Mr. Denny delivered at considerable length the reasons that would induce him to vote against the bill.

Mr. Daniel replied to the remarks of Mr. Burges, in respect to Mr. Clay, and vindicated the general objects of the bill. He demanded the Previous Question; but withdrew his motion at request of

Mr. Burges, who briefly, but severely rejoined.

Mr. Sutherland then made a highly animated speech in opposition to the bill.

Mr. Carson demanded the Previous Question; but the motion failed, only 65 rising to second it.

Mr. Bates, of Maine, then gave the reasons why he should vote for the bill; and

Mr. Pendleton stated the grounds upon which he should vote against it.

Mr. McDuffie, though not believing the bill proposed to make to the South all the concession to which they were justly entitled, yet he believed, such as it was, it would give peace to the country, and therefore would vote for it.

Mr. Speight moved the Previous Question, but immediately withdrew the motion.

Mr. Huntington asked the Yeas and Nays on the passage of the bill, which were ordered.

Mr. Bates, of Mass. made his protest against the bill, as a total surrender of the principle of protection.

Mr. Williams now moved for the previous question.

The motion was seconded—Yeas 93, Noes 65.

Mr. Dickson called for the yeas and nays on the previous question, and they were ordered.

The previous question was then put as follows: Shall the main question be now put?

The yeas and nays being taken, stood—Yeas 118, Nays 85.

The main question, viz: Shall this Bill pass? was then put, and decided by yeas and nays, as follows:

YEAS.—Messrs. Adair, Alexander, Chilton Allen, Robt. Allen, Anderson, Angel, Archer, Armstrong, Arnold, J. S. Barbour, Barnwell, Barringer, James Blair, John Blair, Beon, Bouck, Bouldin, Branch, John Brodhead, Bullard, Cambreleng, Carr, Carson, Chinn, Claiborne, Clay, Clayton, Coke, Connor, Corwin, Coulter, Craig, Creighton, Daniel, Davenport, W. R. Davis, Doubleday, Drayton, Draper, Duncan, Felder, Findlay, Fitzgerald, Foster, Gai



ther, Gilmore, Gordon, Griffin, Thomas Hall, Wm. Hall, Harper, Hawes, Hawkins, Hoffman, Holland, Horn, Howard, Hubbard, Irvin, Isaacks, Jarvis, Jennifer, Richard M. Johnson, Cave Johnson, J. Johnson, Kavanagh, Kerr, Lamar, Lansing, LeCompte, Letcher, Lewis, Lyon, Mardia, Mason, Marshall, Maxwell, Wm. McCoy, McDuffie, McIntire, McKay, Mitchell, Newnan, Newton, Nuckolls, Patton, Plummer, Polk, Rencher, Roane, Root, Semmes, Sewall, Wm. B. Shepard, Augustus H. Shepperd, Smith, Speight, Spence, Stanbery, Standifer, F. Thomas, Philemon Thomas, Wiley Thompson, John Thomson, Tompkins, Verplanck, Ward, Washington, Wayne, Weeks, Elisha Whittlesey, Campbell F. White, Edward D. White, Wickliffe, Williams, Worthington, James Bates, Bell, Bergen, Bethune—118.

**NAVY.**—Messrs. Adams, Heman Allen, Allison, Appleton, Ashley, Babcock, Banks, N. Barber, Barslow, Isaac C. Bates, Boardley, Briggs, John C. Brodhead, Bucher, Burd, Burges, Cahoon, Chandler, Choate, Collier, Lewis Condict, S. Condit, E. Cooke, Bates Cooke, Cooper, Crane, Crawford, John Davis, Dayan, Dearborn, Denny, Dewart, Dickson, Ellsworth, George Evans, Joshua Evans, Edward Everett, Horace Everett, Ford, Grenell, Hiland, Hall, Heister, Hodges, Hogan, Hughes, Huntington, Thrie, Ingersoll, Kendall, Kennon, Adam King, John King, Henry King, Leavitt, Mann, McCarty, Robert McCoy, McKennan, Mercer, Milligan, Muhlenburg, Nelson, Pearce, Pendleton, Pierson, Pitcher, Potts, Randolph, John Reed, Edward C. Reed, Russell, Slade, Southard, Stephens, Storrs, Sutherland, Taylor, Vinton, Wardwell, Watmough, Wilkin, Wheeler, Frederick Whittlesey, Young—85.

So the bill was passed, and sent to the Senate for concurrence.

LEGISLATURE OF NEW YORK.

Saturday, February 23—IN ASSEMBLY.

The Governor informed the House he had signed the bill to construct the *Chenango Canal*.

SUMMARY.

[From the United States Gazette.]

**PHILADELPHIA.**—WASHINGTON'S BIRTH DAY.—Yesterday, the One Hundred and First Anniversary of the birth of Washington, was celebrated in this city, by the laying of a corner stone for a Monument to the Father of the Nation. Notwithstanding that only a few days were taken to make preparation for the ceremonies, the procession was remarkably long, and besides most of the banners which distinguished the different trades on the centennial celebration, several very splendid ones, particularly appropriate to this occasion, were borne in the procession. The troops were commanded by Major General Cadwallader; the whole civic procession was under his honor John Swift, Mayor of the city, acting as Chief Marshal, having several aids.

The Philadelphia Gazette thus remarks on the day and the celebration:

We hope that many thousand minds reverted to his history and example yesterday, and gathered from a consideration of them, new feelings of patriotic ardor, and new devotion to our noble Union. Should difficulties similar to those which beset our country in its infancy ever arise, where shall we look for his like again?

"His was Octavian's prosperous star,  
The rush of Caesar's conquering car  
At battle's call;  
His Scipio's virtue; his the skill  
And the indomitable will  
Of Hannibal.  
His was a Trajan's goodness; his  
A Titus' noble charities,  
And righteous laws;  
His the Archæan arm; the might  
Of Tully to maintain the right  
In Truth's just cause.  
The clemency of Antonine,  
Aurelius's countenance divine,  
Firm, gentle, still;  
The eloquence of Adrian,  
And Theodosius' love to man,  
And generous will.  
In tented field, and bloody fray,  
An Alexander's vigorous sway,  
And stern command;  
The faith of Constantine; ay, more,  
The famous love Camillus bore  
His native land."

**Liberia.**—The Philadelphia papers of Saturday contain extracts from the *Monrovia Herald* of the 7th of December. Things were going on prosperously with the colony. The editor of the *Herald* had recently paid a visit to the Bassa Country, South of Liberia, where the slave trade was still carried on vigorously. A French vessel of only 25 tons was lying at anchor off the coast, waiting for the completion of

her human cargo. The number intended to be taken on board is said to have been 120. The schooner was from Martinique, but the slaves were to be landed at St. Thomas.

A Board for the examination of Midshipmen, whose warrants bear date prior to the first of January, 1828, will be convened at Baltimore on the first Monday in May next.

**Compliment to New England.**—The following beautiful compliment to New England was pronounced by the Hon. William B. Shepard of North Carolina, in the course of a speech delivered in the U. S. House of Representatives:—

"Did I believe it essential to the prosperity or welfare of the Southern States, that the manufactures of the North should be levelled with the dust, it would be an unpleasant duty to vote a benefit to myself which would be the entire ruin of another. A few summers ago, while flying from the demon of ill health, I visited New England. I found the towns and villages crowded with an industrious and enterprising population, her hills and valleys redolent with health, prosperity and contentment; every mind seemed to be intent, every hand was occupied; the world does not contain a more flourishing community. There the advantages of education are extended to the poorest individual in society, and that society receives its renumeration in his sober, industrious and economical habits. If the divine Plato were alive he would no longer draw upon his imagination for a specimen of a perfect republic; he would there find a community, in which the humblest individual had the same voice with his more wealthy neighbor, in laying the public burdens for the public welfare. I asked myself if it were possible that the prosperity of this people could be the hot-bed production of an artificial system, or rather if it were not the result of a long continued toil, of an industry that never tired, of an economy that never slept. I looked upon the scene around me with no feelings of murmuring discontent; I felt the more rejoiced that it was a part of my country.

**MR. LENT**, of Queens county, L. I., member from the first congressional district of this State, died at Washington after a short but violent illness on Friday. The House of Representatives, on communication of the melancholy intelligence, immediately adjourned, after passing the usual votes of respect.

**MISSION TO FRANCE.**—It has been for some time a settled point in the public belief, that the Secretary of State, Mr. Livingston, was to be the successor of Mr. Rives at the Court of France. By accounts from Washington to-day, however, it seems no Minister is to be sent; and that *Leavitt Harris*, long Consul-General in St. Petersburg, has been nominated to the Senate as *Chargé d'Affaires* to France.

**UNITED STATES SENATOR FOR NEW JERSEY.**—The Legislature of New Jersey, now in session at Trenton, on Saturday made choice of Samuel L. Southard, the present Governor, as United States Senator for the ensuing six years, in the place of Malon Dickerson, whose term expires on the 4th March. The vote stood—S. L. Southard, (National,) 37; Captain R. Stockton, (Jackson,) 23. Mr. Dickerson was not a candidate. The State will be ably represented in the Senate.

The Vestry of St. Ann's Church, Brooklyn, have called the Rev. Benjamin C. Cutler to the rectorship of that church, to be vacated the 1st of May next, by the right Rev. Dr. McIlvaine, Bishop of Ohio. Mr. Cutler has accepted the call. While we cannot but regret the loss of our respected brother's services in the City Mission, we feel bound to acquiesce in his decision, from the knowledge that it was guided by counsel from some of the best friends both of the Mission and of the Church.—[Churchman.]

**MILITIA OF MAINE.**—By the report of the Adjutant General it appears that the militia of Maine, according to the last annual return, are in number 40,006, exclusive of seven companies, from which no returns were received. They are divided as follows:—Cavalry, 1592; Artillery, 1767; Infantry, 32,092; Light Infantry, 3286; Riflemen, 1269. Seventeen Courts Martial were held during the last year at an expense of \$936 06.

**Commerce of Cincinnati.**—During the past five years there have arrived at the public wharf in Cincinnati 6852 steamboats, laden with produce, their aggregate burthen being 766,513 tons. During the year 1833, there were landed there, among other merchandise, the following, with the annexed estimated value:—97,578 brls. Flour, at \$4 25 per brl. \$414,656; 40,425 do Whiskey, at \$9, \$363,825; 19,758 Pork, at 10, \$197,580; 30,960 kegs Lard, at \$2 75 per keg, 85,140; 1,156 brls. do, at 15 per brl. 17,

340; 1,877,240 lbs. Bacon, 41.2 cts per lb. 84,475; 53,539 do Butter, 9 cts. do, 4,818; 99 brls. Linseed Oil, \$35 per brl. \$3,465—Total value, \$1,171,999.

FIRE AT CHARLESTON.

Engineer Department, Charleston, Feb. 17, 1833.

To the Hon. HENRY L. PINCKNEY, Intendant:

Sir,—After a lapse of nearly seven years, our city was visited last evening with a conflagration of more than ordinary character. At seven o'clock a small wooden building, occupied by Henry Lovett, a dealer in old iron and rags, situated on East Bay, a few doors north of Market street, was discovered to be in flames. The wind at this time blowing from N. E. directed the fire towards Market street, and from thence to the lower or small meat market, a long brick arched building, covered with shingles. The fire at this time began a rapid and alarming progress westward, towards Meeting street, and from the nature of the materials which formed the buildings in that street, great apprehensions were entertained that the squares on each side of the market would be involved in one general conflagration. The very prompt and efficient exertions of the Axemen soon brought the long wooden vegetable stall attached to the lower market to the ground and arrested the progress of the flames, so far as the market was calculated to extend them in that quarter. The fire, however, on the South side of the street, making rapid strides in a Westwardly direction.—In the mean time, three large wooden buildings on the south side of the street took fire, and threatened to lay the whole southern section of that part of the city in ashes. At this moment the wind fortunately changed to S.E. and drove the flames back, and confined them to the buildings already on fire to the North, and by the vigorous exertions displayed by those who were aiding, the front of the houses on fire were driven out, and the flames entirely arrested.

Orders were given to make a breach by blowing up the large three story wooden building at the corner of Anson street, occupied by Anson & Munroe as a grain store, in order to prevent the fire crossing Anson street. This order was promptly executed, although the whole roof of the building was enveloped in flames, and certainly had the tendency of arresting the fire in that direction, and confined it to the Eastern side of the street, although Mr. Johnson's Corn Store and Mill on the Western side of the street were several times on fire, and was composed entirely of wood, yet the firemen succeeded in saving it. At this point the fire stopped. It progressed a short distance up Anson st. and destroyed a very fine large three story brick building, occupied by Mrs. Lusher, as a boarding house, and owned by the Misses Ross—an attempt was made to save this house by blowing up a two story building near it, occupied by Mrs. Hutchinson, but this latter building was so completely enveloped by flame, that although it was levelled to the ground, yet the object in view was not obtained. At this point the fire may be said to have been arrested. Several buildings at a great distance from the conflagration, were set on fire by the flakes, but the vigilance of the neighbors prevented any disasters from this source.

Connected with this subject, it affords us much pleasure to communicate to you the important aid rendered us on the occasion by Col. Bankhead of the army, and Capt. Zantzinger of the Natchez. As soon as it was discovered that our city was in flames, the former, with Major Henman and Captain Ringgold, manned their boats with 100 men and repaired to the spot. A detachment from the Natchez, with buckets, and their officers, also made their appearance, and exerted themselves manfully and efficiently.—Those gentlemen deserve our gratitude for repairing to our succour with such promptitude, and rendering services that cannot be too highly appreciated.

The number of buildings destroyed are between 30 and 40, and the value estimated at \$30,000.

MARTIN STROBEL, Principal Engineer.

[From the London Court Journal, Jan. 12.]

The Comte de Survilliers (Joseph Buonaparte) is constantly surrounded by the members of his family now in town; his residence in Park Crescent is the scene of continual hospitality. His visit to Europe for the chance of an interview with the Duke of Reichstadt having been undertaken too late, it is his intention to pass one year in England, and then return to the magnificent seat he has created in the neighborhood of Philadelphia.

The Marchioness of Wellesley has resumed her attendance upon her Majesty at Brighton, as Lady of the Bedchamber. The Marchioness is at present in deep mourning for the death of her venerable grandfather, Carroll, of Carrollton, the last surviving individual of those who signed the celebrated Declaration of American Independence.



## NEW-YORK AMERICAN.

FEBRUARY 23, 25, 26, 27, 28, MARCH 1—1833.

## LITERARY NOTICES.

**SHINE AND SENSIBILITY**, by Miss Austin. Philadelphia: Carey & Lee.—Of the novels of Miss Austin, so justly characterized as "family novels," we have spoken on several previous occasions, so much in commendation, that we need do no more now than notify our readers that the Philadelphia publishers have just issued this one, not the least popular of the series.

**RECORDS OF MY LIFE**, by John Taylor, author of *Monsieur Tonson*. New-York: J. & J. Harper.—An amusing volume, certainly, though redundant, and one which judicious pruning would render much more attractive. We quoted, in our last Saturday's Review some extracts from this book, as given in Littel's Museum; and we will not therefore now occupy our columns, burthened as they are with other claims, with many additional ones.

We give the annexed letter from Mrs. Inchbald, an actress and an authoress, though much more known in the latter than the former character—as remarkable for the moral courage, honorable affection, and sense of true independence which it exhibits. Mrs. Inchbald, who was supposed to be in the receipt of large profits, lived in obscure lodgings and with great regard to economy. This was made a reproach against her by some acquaintances, and her friend Taylor apprized her of the fact. She thus replied:

My dear Sir—I read your letter with gratitude, because I have had so many proofs of your friendship for me; that I do not once doubt of your kind intentions.

You have taken the best method possible, on such an occasion, not to hurt my spirits; for had you suspected me to be insane, or even nervous, you would have mentioned the subject with more caution, and by so doing might have given me alarm.

That the world should say I have lost my senses, I can readily forgive, when I recollect that a few years ago it said the same of Mrs. Siddons.

I am now fifty-two years old, and yet if I were to dress, paint, and visit, no one would call my understanding in question; or, if I were to beg from all my acquaintance a guinea or two, as subscription for a foolish book, no one would accuse me of avarice. But because I choose that retirement suitable to my years, and think it my duty to support two sisters instead of one servant, I am accused of madness. I might plunge in debt, be confined in prison, a pensioner on "The Literary Fund," or be gay as a girl of eighteen; and yet be considered as perfectly in my senses; but because I choose to live in independence, affluence to me, with a mind serene and prospects unclouded, I am supposed to be mad. In making use of the word affluence, I do not mean to exclude some inconveniences annexed, but this is the case in every state. I wish for more suitable lodgings, but I am unfortunately averse to a street, after living so long in a square, but with all my labor to find one, I cannot fix on a spot such as I wish to make my residence for life; and till I do, and am confined to London, the beautiful view from my present apartment of the Surry hills and the Thames, invites me to remain here, for I believe that there is neither such fine air nor so fine a prospect in all the town. I am, besides, near my sisters here; and the time when they are not with me is so wholly engrossed in writing, that I want leisure for the convenience of walking out. Retirement in the country would perhaps, have been more advisable than in London, but my sisters did not like to accompany me, and I did not like to leave them behind. There is, besides, something animating in the reflection that I am in London, though partaking of none of its festivities.

In the midst of the serenity I have been boasting, I own that I have one sorrow that weighs heavy upon me. Much as it is supposed that I loved money, I would gladly give up all that I am at present earning, and something added to it, that I had never engaged in those unwieldy Prefaces. I have had my Memoirs, in four volumes, for years lying beside me. A large sum has been offered for them, yet, though I have been charged with loving money, I never hesitated when I conceived that my reputation was in the balance. I accepted the offer made

to me to write these things, as far as the less evil of the two, indeed as no evil; but now I fear that I should not have encountered more odium had I published my life; and yet a great deal of difficulty might have been avoided in arranging the former for publication to my advantage, by a proper assortment of subjects. As it is, I must submit, for I am bound in honor to obey.

E. INCHBALD.

Mr. Taylor adds these remarks on the letter—

It may be thought that I was officious in giving occasion for the foregoing letter; but, as I have said, hearing her character arraigned for avarice and meanness among the theatrical community, I deemed it right to adopt an intrepid sincerity, such as friendship demanded. I remember that my friend Mr. Richardson, whom I have before mentioned, soon after we became acquainted, on his leaving St. John's College, Cambridge, exacted a promise from me that I would tell him whatever I might hear to his disadvantage, that he might reform if the charge was just, or defend himself if false. This rule I have always observed with those dear to me.

Mrs. Inchbald lived at the time on the south side of the Strand, opposite the New Church, and her apartment was an attic; and thus did she deny herself many of the comforts of life from motives of affection to relations who required pecuniary assistance. Such a letter does honor to her feelings, and I am proud of having tempted her to write it. The Prefaces which she mentions, were to accompany a new edition of "The British Drama," and they prove her pure taste and sound judgment in her critical remarks on the respective productions. Her novels of a "Simple Story," and "Nature and Art," manifest a full knowledge of the depth of the human heart and of the changes of disposition to which it is so frequently subjected by the vicissitudes of fortune. The novels will live like those of Smollet and Fielding, though of a very different description, and with respect to profound knowledge and moral tendency, more in analogy with the works of Richardson.

The following extracts are taken at hazard:

*Kings, Lords, and Commons, at a dinner party in the Fleet prison.*

"Colonel Frederick, whom I have mentioned before, as the son of Theodore, King of Corsica, was a particular friend of mine. He told me he was once in so much distress, that when he waited the result of a petition at the Court of Vienna, he had actually been two days without food. On the third day a lady in attendance on the Court, whom he had previously addressed on the subject of his petition, observing his languid and exhausted state, offered him a dish of chocolate, with some cakes, which rendered him more able to converse with her; in a short time they conceived a regard for each other, and were afterwards married. \* \* \*

He said that while his father was in the Fleet prison for debt, Sir John Steward was a fellow-prisoner on the same account. The latter had a turkey presented to him by a friend, and he invited King Theodore and his son to partake of it. Lady Jane Douglas was of the party. She had her child, and a girl with her as a maid servant, to carry her child; she lived in an obscure lodging at Chelsea. In the evening Colonel Frederick offered to attend her home, and she accepted his courtesy. The child was carried in turn by the mother, the girl and the colonel. On their journey, he said there was a slight rain, and common civility would have induced him to call a coach, but that he had no money in his pocket, and he was afraid that Lady Jane was in the same predicament. He was therefore obliged to submit to the suspicion of churlish meanness or poverty, and to content himself with occasionally carrying the child to the end of the journey.

"The colonel used to consider that child as the rightful claimant of the property on which he was opposed by the guardians of the Duke of Hamilton.

"The colonel related to me another curious anecdote, on which I rely, as I always found him consistent in his narrations. When Prince Poniatowski, who was afterwards Stanislaus, the last King of Poland, was in this country, his chief, I might truly say, his only companion, was Colonel Frederick. They were accustomed to walk together round the suburbs of the town, and to dine at a tavern or common eating-house. On one occasion the prince had some bills to discount in the city, and took Frederick with him to transact the business. The prince remained at Batson's Coffee House, Cornhill, while Frederick was employed on the bills. Some impediment occurred, which prevented the affair from being settled that day, and they proceeded on their

usual walk before dinner, round Islington. After their walk they went to Dolly's in Paternoster row. Their dinner was beefsteaks, a pot of porter, and a bottle of port. The bill was presented to the prince, who, on looking over it, said it was reasonable, and handed it to Frederick, who concurred in the same opinion, and returned it to the prince, who desired him to pay. "I have no money," said Frederick. "Nor have I," said the prince. "What are we to do," he added. Frederick paused a few moments, then desired the prince to remain until he returned, left the place, pledged his watch at the nearest pawnbroker's, and thus discharged the reckoning. \* \* \*

"The prince, after he became monarch of Poland, occasionally kept up an intercourse with Frederick, and in one of his letters asked the latter if he remembered when they were in pawn at a London Tavern."

It will be but a melancholy termination to these anecdotes to add, that Colonel Frederick became involved in some bill transactions, and apprehensive of the consequences, borrowed a pistol of a friend and shot himself one evening in St. Margaret's churchyard.

Of the late Lord Erskine—

"Here I may relate a circumstance which manifests an extraordinary revolution in the life of a conspicuous character. A lieutenant in the royal navy had written a political pamphlet, but being called to his duty, was not able to see it through the press. He therefore placed it in the hands of a bookseller, desiring that he would give it to some literary man, who, for duly preparing it for publication, should have half the profits. The bookseller gave it to Mr. Cooke, who soon discharged his duty. The work was published and the profits were thirty pounds, all of which were given to Mr. Cooke, who took his portion, and reserved the other half for the author whenever he should call for it. Many years elapsed, and he heard nothing of him. At length a gentleman called on him, told him his name, and declared himself to be the author of the pamphlet, telling him he knew that fifteen pounds were due to him on account of the pamphlet, and adding, he was ashamed to take it, but that 'his poverty, and not his will,' consented, as he had a wife and an increasing family. Mr. Cooke had the money ready for him, which the stranger took, and expressed his gratitude at parting. This necessitous author was the late Lord Erskine."

JACK TAYLOR, as he was familiarly called, who was an oculist by profession and descent (both father and grandfather being of that profession), seemed to be the friend of every one he knew. All the persons, almost, of whom he speaks (and they are numerous and in every walk of life), he refers to as "my particular friend." He shared in their successes—aided, as far as limited means would allow, their adversities—and, above all, was never absent at their burial. He must, by his own showing, have attended more funerals than any man in England, not an undertaker by trade. Of the pertinacity with which he adhered to doing funeral honors, a singular and (notwithstanding the melancholy occasion) amusing proof is related at page 332, where he and Sheridan, having to attend the remains of an old and valued friend to the grave, at some twenty miles distance from London, arrived after the ceremony was over, and all but the clergyman were dispersed. Grieved at the disappointment, our mourning autobiographer "asked the clergyman if the ceremony could properly be repeated, as we were all bitterly disappointed that we were prevented from testifying our grief by partaking in the last offices of respect to the remains of a valued friend." After consideration it was repeated, partly in the church, partly at the side of the grave! and in consequence Mr. Sheridan and Mr. Taylor felt "a mournful exultation," at not having "failed in any respect to do honor to a departed friend." We know no parallel for this story, but that of the French *petit maître*, who, going with some ladies to an astronomer's, to observe an eclipse, and arriving after it was over, assured his fair friends it was of no consequence, for the astronomer was "a particular friend" of his, and would cheerfully repeat it for his sake.

With all its repetitions and frivolities, Jack Taylor's "Records" is a capital book for half an hour at a time.



A HISTORY OF KING'S CHAPEL, BOSTON, by F. W. P. GREENWOOD, Junior Minister of the Chapel: Boston, Carter, Hendes & Co., and Allen & Ticknor.—All who have visited Boston remember the old Stone Chapel. We have in the pages of the little volume before us its history, as embodied in several discourses preached before the congregation worshipping there, by its junior minister; the venerable Dr. Freeman, who was ordained to that Church in 1787, being still its senior minister. This was the first Episcopal Church in New England; and the narrative of its early struggles against the intolerance of the Puritans, of its gradual progress, and of the change of doctrine which took place on the induction of Dr. Freeman, will interest antiquarians certainly, and probably Episcopalians. It is a very neat and well printed little volume.

EARLY LESSONS FOR LEARNING FRENCH—selected from approved authors: Boston, ALLEN & TICKNOR.—A well imagined and well executed little work, intended for children of from eight to ten years of age, learning French, and for whom the ordinary class books, such as Telemachus and Charles XII., are uninteresting, and, for the most part, unintelligible. The selections are of little incidents and stories fitted to arrest the attention of the child, and give the zest of curiosity to the labor of translation. The compiler proposes to continue the series for those of more mature years. We hope he may be encouraged by the success of this first part to do so.

FINDEN'S LANDSCAPE ILLUSTRATIONS OF LORD BYRON'S WORKS: Part IX.: London, Murray; New York, Disturnell, No. 155 Broadway.—The present number of this beautiful publication excels if anything those that have preceded it. Cape Leucadia is the subject of the first plate, which is a picture of much spirit. The cliffs in the back ground are wrapped in heavy mist, and the light of a troubled sky strikes from a single quarter upon the famous rock whence the "blue-eyed Lesbian" made her fatal leap. A couple of polacres scudding before the breeze in the foreground, and a brig with another craft bearing away in the distance, give animation to the scene. "Venice from the entrance of the Grand Canal," is the title of the next engraving, which is executed with delicacy and finish. "Cork Convent near Cintra," which follows, is not so good. But the effect of light and shade is beautifully shown in the bold architectural features of the Castle of Ferrara, on the next leaf. The most interesting plate of all, however, is LANTHE, from the original picture painted at the request of Lord Byron. The face of the noble child has all that poetic expression which the poet so glowingly attributes to it in his introduction to the second canto of Childe Harold: the chiselled nose, the curved and beautifully parted lips, and above all

"The eye, which wild as the gazelle's,  
Wins where it wanders, dazzles where it dwells."

IMPROVED ARITHMETIC, newly arranged, &c. by DANIEL PARKER, A. M. New York: R. Bartlett & S. Rayner.—A larger treatise by the same author on the science of numbers, was received with so much favor, as to induce him to make an effort to extend its usefulness by diminishing the bulk of the volume. Hence the little school book now before us, which is well stereotyped, and well recommended by Teachers.

POEMS, by Miss H. F. Gould. Second Edition, with Additions. Boston: Hilliard, Gray & Co.—They who have been charmed with the freshness, delicacy, and vivacity of imagination displayed in Miss Gould's fugitive verses, when travelling through the country in the corners of newspapers, will not be the less pleased with them when read anew as collected here. There is a youthful sensibility of heart, a juvenescence of feeling, a keen susceptibility to whatever is beautiful and striking in nature, about these poems, that in this ennuviant age, when nil admirari

seems to be the motto of all, come with a refreshing and quickening influence upon the senses. Miss Gould does not belong to that numerous and most respectable class of poetesses; the female Byrons, who wither the leaves of Albums by the "blighted feelings" they inscribe upon them, and rend the hearts of all the young bachelors in the country, by the revelation they make in Magazines of their love-lorn and pitiable condition. Nor yet does she belong to that other equally hopeful family, the Violas and Rosas who escape from the city to ruralize in a turnip field in the suburbs, and prate about "running brooks" after pattering through a gutter in India rubbers. She has neither the affected callousness of the first to the sense of objects in which every well regulated and refined mind feels an interest, nor does she betray the mawkish sensibility of the last. Hers is a heart where a high moral sense and solid understanding seem not the less to be present, because she yields it up to the full impulses of warm and vivid poetic feeling.

But we are cut short in our observations when but just fairly embarked in them, to make room for the contents of the southern mail, but now arrived; and we can only conclude by giving several extracts from this pleasing volume already in type, each of which, though selected to illustrate some particular comment we intended to make, rather than as a favorable specimen of the writer's powers, has yet merit enough to recommend itself.

THE SNOW-FLAKE.

"Now, if I fall, will it be my lot  
To be cast in some lone, and lonely spot,  
To melt, and to sink, unseen, or forgot?  
And there will my course be ended?"  
"Twas this a feathery Snow-Flake said,  
As down through measureless space it strayed,  
Or, as half by dalliance, half afraid,  
It seemed in mid air suspended."

"Oh! no," said the Earth, "thou shalt not lie  
Neglected and lone on my lap to die;  
Thou pure and delicate child of the sky!  
For, thou wilt be safe in my keeping.  
But then, I must give thee a lovelier form—  
Thou wilt not be part of the wintry storm,  
But revive, when the sunbeams are yellow and warm,  
And the flowers from my bosom are peeping!"

"And then thou shalt have thy choice, to be  
Restored in the lily that decks the lea,  
In the jessamine-bloom, the anemone,  
Or aught of thy spotless whiteness:—  
To melt, and be cast in a glittering bead,  
With the pearls, that the night scatters over the mead,  
In the cup where the bee and the fire-fly feed,"  
Regarding thy dazzling brightness."

"Then I will drop," said the trusting Flake;  
But bear it in mind, that the choice I make  
Is not in the flowers, nor the dew to wake;  
Nor the mist, that shall pass with the morning.  
For, things of thyself, they expire with thee;  
But those that are lent from on high, like me,  
They rise and will live, from the dust set free,  
To the regions above returning."

THE SIAMESE TWINS.

Mysterious tie by the Hand above,  
Which nothing below must part!  
Thou visible image of faithful love,  
Firm union of heart and heart;  
The mind to her utmost bound may run,  
And summon her light in vain  
To scan the twin that must still be one;  
The one that will still be twin!

The beat of this bosom forbears to reach  
Where the other distinctly goes;  
Yet, the stream that empurples the veins of each,  
Through the breast of his brother flows!  
One grief must be felt by this twofold mark,  
As the points of a double dart;  
And the joy lit up by a single spark,  
Is sunshine in either heart.

O wonder to baffle poor human skill  
In clay of the human mould!  
But a greater mystery of all must still,  
In the union of souls, behold.  
Ye are living harps, by your silken strings  
In a heavenly concord bound:  
And who o'er one but a finger flings,  
Awakens you both to sound.

DAWN ON THE SEASIDE.

The sun has thrown his morning beams  
Against the cliffs that fence the waves,  
And down his mellow glory streams,  
Through narrow clefts and widening caves.

The mossy rock, the foamy surge,  
The pebbly beach and grassy height,  
And site and cot, on ocean's verge,  
Are in a flood of Sabbath light.

THE GENIUS OF SIR WALTER SCOTT.

It parted the sable waves that sweep  
Across oblivion's sea,  
And brought up to light from that fearful deep,

The things that for ages it had to keep,  
In their primal identity.

It broke the seal of the silent tomb!—

It opened the graves of men,  
It made their ashes their fire resume,  
And touched them with beauty, and life, and bloom,  
Till they breathed and moved again!

Time! what hast thou to do with one,  
Who knew not a wasted hour—  
Whose pen with the sands of thy glass could run,  
And show at each turning a miracle done,  
A work that defies thy power!

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Hudson, Columbia County, New-York,  
January 29, 1833.

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10 do. Danish Smalts, FFFE; 20 do. Saxon do.  
8 do. small do.; 20 kegs Tartaric Acid  
200 kegs Saltpetre  
200 bales superior quality Italian Hemp  
20 tons Old Lead  
300 barrels Western Canal Flour  
500 do. Richmond country do.  
100 bales Florida Cotton; 20 do. Mexican do.  
20 do. Sea Island do.  
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